

# The Mining Journal.

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1465.—Vol. XXXIII.

LONDON, SATURDAY, SEPTEMBER 19, 1863.

(STAMPED.....SIXPENCE.  
UNSTAMPED.....FIVEPENCE.)

### MR. JAMES CROFTS, SHAREBROKER,

No. 1, FINCH LANE, CORNHILL.  
Mr. Crofts transacts business, in the way of PURCHASE or SALE, in every description of stocks, particularly in BRITISH MINES, in no case departing from the position of a broker, at net prices. All orders must be met with the utmost punctuality and speed, and advice given as to the nature and eligibility of INVESTMENTS, when required, EXCHANGES OF STOCK effected on the most advantageous basis, subject only to one commission.

Mr. Crofts directs special attention to the shares in the Twelve Apostles Amalgamated Mines, to pay 15 per cent. yearly in dividends, and raising 100 to 120 tons of lead ore monthly; also to Pant-y-Fydw, Miners Union, Cefn Clien, Penre Lygan, and Central Miners, all prizes, or about to become so.

A supplementary report has reached the writer, correcting, in the first place, an error in his last notice in the Journal of the Twelve Apostles Amalgamated Mines, respecting the rate of dividends per annum to be paid by these mines, being 15 per cent. average, instead of 5 per cent., as published in last week's Journal; and next, detailing improvements and prospects of an astounding character, showing these shares equally suited to investors for income, and to speculators for immediate profits. It is important, also, to add that the rich lodes and bunches of these mines, so strongly developing themselves, are represented as running into Central Miners Mine. The report is dated Shrewsbury, September 14.

WREXHAM, SEPT. 11.—Miners Union shares are again up, and I am no seller at the prices quoted in my last. The 50 fm. level is improving fast, and a great course of ore, proved in the dump a few yards ahead, is expected every change of men, when I have no doubt the shares will be 20s. This discovery must of necessity send up Central Miners, as the Union lode runs right into that set.

FOR SALE:—10 Brynford Hall, £26 net (safe to buy); 50 Illogan, 24s. (calls paid).

### MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.

JAMES LANE has FOR SALE, at net prices:—30 Arthur; 30 Roscawen; 5 Basset and Grylla, £24; 25 Crebor, 32s.; 50 Cornubia (fully paid), 30s.; 50 East Jane; 20 East Carn Brea, £7½; 10 East Lovell, £4½; 100 East Bronfloyd (£2 paid), 11s.; 50 Great Wheal Busy; 10 Hawkmoor, 3s. 6d.; 20 Ludcott, £2; 30 Lady Bertha, 13s.; 30 New South Caradon; 20 New Wheal Martha, £2½; 10 North Crofty; 50 North Jane, 31s.; 100 North Miners (preference), 5s.; 100 Silver Mountain; 20 Silver Vein; 30 St. Just Consols, 14s. 6d.; 20 St. Just United, £3¼; 10 Tremayne, £10½.

### STOCK AND SHAREDEALER.—MR. PETER WATSON,

ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD-STREET, LONDON, E.C.  
TELEGRAPHIC MESSAGES TO BUY or SELL Railway, Bank, Mine, and other Shares and Stocks, punctually attended to on commission, or at net prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

Eighteen years' experience.  
(Two in Cornwall and sixteen in London.)  
Bankers: Union Bank of London.

Every information can be obtained on personal application or by letter, as to purchases and sales of mines and other shares, and the best investment for capital.

From the close proximity of his Office to the Stock Exchange, as well as the Mining Exchange, Mr. Watson is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.—September 18, 1863.

### MR. PETER WATSON has been on a TOUR OF INSPECTION

OF SEVERAL MINES IN CORNWALL AND DEVON for about three weeks, and will RETURN TO LONDON ON MONDAY NEXT, when he will be in a position to advise his clients and others, who may entrust him with their business, as to the purchase and sale of mine shares.

N.B.—In PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST, AND SYNOPSIS OF CORNISH AND DEVON MINES," &c., Nos. 291 and 292, Vol. VII., of the 25th September and 24 October, will contain important information. Annual subscription, £1 1s.; single copy, 6d. (post free).  
79, Old Broad-street, London, E.C.

### MR. LELAND, 11, ROYAL EXCHANGE, LONDON, E.C., has

FOR SALE the FOLLOWING MINING SHARES, free of commission:—

3 Bryn Gwlog, £5	10 Ludcott, £3 3s. 9d.	25 Sordridge, £10
5 Basset, £5	50 Lady Bertha, 11s. 6d.	1 So. Wh. Frances, £52
5 Bedford United, £2½	5 Marke Valley, £50½	100 South Caradon Hooper, £10
100 Camborne Vein, 57s. 6d.	5 Mary Ann, £11½	10 Tincroft, £19½
1 Condurow, £1	75 North Miners, 4s. 6d.	5 Treloy, £16½
4 Cook's Kitchen, £24½	2 New Seton, £1	5 Tamar Consols, 8s.
5 Clifford Amal., £33½	10 North Basset, £3 18s. 6d.	5 Tolvaaden, 15s.
50 Cardigan Consols, £5	20 North Buller, £5½	50 Vale of Towry, £25½
75 Cwmbran, £5	10 North Frances, £1	5 Vigna and Clogau, £1
30 Drake Walls, 37s. 3d.	20 North Downs, £1½	40 Wheal Unity, £1
40 East Russell, £24½	5 Nangles, £24½	70 Worthing, 10s. 9d.
5 East Carn Brea, £7 17 6	5 North Phoenix, £20½	10 Wh. Kitty (St. Agnes), £13 12s. 6d.
10 East Chiverton, £1	1 North Roskear, £25½	1 West Seton, £1
10 East Trekerby, £1	2 N. Trekerby, £13½	2 West Caradon, £23½
25 East Providence, £3¼	30 North Crofty, £2 18s. 9d.	2 West Toigues, £20
30 East Grenville, £3 12 6	5 Par Consols, £4	1 Wheal Seton, £217
5 East Caradon, £28½	50 Pedn-an-drea, 20s. 3d.	30 Wh. Grenville, £5 12 6
5 East Lovell, £3½	30 Pendenn Cons., £8½	1 Wheal Harrie, £13½
10 East Basset, £21½	5 Providence, £43½	1 Wheal Buller, £38
5 East Roscawen, £1	10 Rosewarne Consols, £1	10 Wheal Harrie, 50s
5 Grambler, £1	10 Rosewarne United, £1	5 Wheal Union, £3
5 Great Fortune, £29½	2 South Toigues, £1	50 Wheal Crobar, 31s. 3d.
100 Great Retallack, £1	5 Sparrow Moor, £18½	50 Wheal Edward, £2
10 Garreg, 2s. 6d.	50 South Grenville, 5s. 9d.	1 St. Ives Consols, £30
50 Kelly Bray, 16s.	1 St. John del Rey, £30	3 Wheal Margaret, £30½

Mr. LELAND requests all his friends holding shares in Tolvaaden Mine to send him their proxies, as he purposes attending the meeting to be held on the 8th October.

September 18, 1863.

### MR. E. GOMPERTS, MINING OFFICES,

3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C., BUSINESS TRANSACTIONS IN BRITISH AND FOREIGN STOCKS AND SHARES.

Terms, 1½ per cent.—Bankers: London and Westminster Bank.

### WILLIAM ALLISON, STOCK, SHARE, AND MINING

BROKER, 29, AUSTINFRIARS, LONDON, E.C.  
Orders to buy or sell, accompanied by references, punctually attended to.

### JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET,

AND MINING EXCHANGE, LONDON, E.C., has FOR SALE:—

50 Camborne Vein, 50s.	50 Crebor, 32s. 6d.	20 E. Carn Brea, £8½
50 E. Grenville, 53s. 9d.	20 East Russell, £3¼	20 Ury, £24½
50 Great Retallack, 6s.	20 East Caradon, £23½	5 Clifford, £34

Also a trader in Harriett, New Wendon, North Miners preference, Nangles, &c.

Mr. Hume can recommend two mines of great promise, at present at a mere nominal figure, but which, from their merits and improving prospects, must soon command a very high price in the market. Particulars will be supplied on application.

JAMES HUME'S "Circular" for September, free for 6d.; annual subscription 5s.

Orders executed at a commission of 1½ per cent.

Bankers: London and Joint-stock Bank.

### MR. JOHN BATTERS, OF 13, THROGMORTON STREET,

has business in the Twelve Apostles Amalgamated (Dividend Lead Mines), raising upwards of 100 tons of lead ore per month, at Miners, near Wrexham.

September 19, 1863.

### MESSRS. WARD AND JACKMAN, STOCK AND

SHAREBROKERS, 2, ADAM'S COURT, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C. (ESTABLISHED TEN YEARS.)

TRANSACT BUSINESS IN BRITISH AND FOREIGN MINING SHARES AND OTHER SECURITIES AT CLOSEST PRICES, NET or on commission, but not being DEALERS only execute orders confined to them.

Telegraphic messages to buy or sell shares of every description promptly executed for immediate cash, or the fortnightly settlements.

Commission, 1½ per cent. on all transactions.  
Bankers: London and Westminster, Lothbury.

### MR. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL

EXCHANGE BUILDINGS, LONDON, E.C. (Established 16 years), has FOR SALE, at net prices:—5 Clifford, £30½; 100 East Seton, 7s.; 250 Great Northern, 2s. 6d.; 75 Drake Walls, 37s. 6d.; 150 Illogan, 24s.; 50 Cefn Clien, 30s.; 150 Hawkmoor, 3s. 6d.; 200 Santa Barbara, 10s. 9d.; 50 Pant-y-Fydw, 32s. 6d.; 200 St. David's, 4s. 6d.; 40 Great Wheal Busy, £3½; 75 West Pensturlith; 125 South Grenville, 6s. 9d.; 200 Garreg, 2s.; 5 Nangles; 100 Dale, 13s.; 150 Molland, 2s.; 70 Wheal Unity, 16s.; 150 Camborne Vein, 50s.; 100 Great Devon and Bedford (Colchabar), 2½; 200 North Miners (Preference); 60 Gawton; 50 Okal Tor, £2½; 100 West Maria and Fortescue, 34s.; 60 Lady Bertha, 11s. 6d.; 35 Ury; 50 Great South Toigues; 100 South Caradon Hooper, 13s. 9d.; 5 Tincroft, £20; 20 East Chiverton, £1½; 25 North Crofty; 25 Kelly Bray, 17s.; 65 Merilyn, 5s.; 25 Garlinda, £24½; 80 Great Caradon, 28s. 6d.; 15 North Downs; 120 North Robert; 100 West Trevelyan, 7s.

BUYER OF Clifford, £33; Clujah and Wentworth, Wheal Crobar, North Pool, West Caradon, South Condurow, Worthing.

### GEORGE MOORE,

1, CROWN COURT, THREADNEEDLE STREET.  
In any business that GEORGE MOORE is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

### JAMES HERRON has FOR SALE the following SHARES, at

the prices quoted, and FREE OF COMMISSION:—

60 Aberffrow, £10	25 Holmbush (old shares), 14s.	25 South Carn Brea, £3¼
5 Bas. & Grylla, £22 7s. 6d.	20 Illogan, 24s. 9d.	50 St. Just Udy, £2 16s. 9d.
1 Basset, £77½	40 Kelly Bray, 17s.	1 South Frances, £59
20 Bottle Hill, £1	10 Ludcott, £3	20 St. Day United, 17s. 9d.
10 Cobbe, £29½	5 Linares, £7½	30 St. Just Consols, 10s. 9d.
5 Clifford Amal., £33½	50 Lady Bertha, 10s. 6d.	1 Stray Park, £37½
3 Cook's Kitchen, £24½	5 Long Rake, £1	50 S. Car. Hooper, 12s. 9d.
10 Camborne Vein, £2½	40 Montes Aureos, £2½	1 S. Toigues, £39 18s.
30 Caradon Hill, 18s. 6d.	5 Marke Valley, £5 8s. 9d.	1 South Caradon, £42½
5 Crown Consols, 18s. 9d.	30 Marquitta, 11s. 9d.	30 South Gorland, £1
5 Copper Hill, £1	20 Merilyn, £1	5 S. Crofty, £24 18s. 9d.
30 Cape Copper, £1	20 North Dolcoath, £2 6 9	50 Tamar, 6s. 10d.
5 Clujah & Went., £37½	10 North Trekerby, £3¼	10 Tolvaaden, £1
30 Cwm Brana, £1	5 North Basset, £2½	1 Trevelyan, £17½
5 Dale, 11s. 6d.	5 North Crofty, £4½	3 Treloy Consols, £1
100 Don Pedro No. del Rey, 20s. 6d.	100 North Miners preference shares (5s. pd.), 3s. 6d. pm.	10 Tincroft, £19 18s.
50 Drake Walls, 40s.	1 New Seton, £29½	20 United Mexican £7 12s.
2 Ding Dong, 20s.	50 North Miners, 3s. 9d.	100 Vallanzasca, £1
1 Dev. Gt. Cons., £57½	30 New Wh. Martha (fully paid), £2 15s.	150 Vale of Towry, 5s. 3d.
10 E. Carn Brea, £7 18s.	5 Nangles, £24½	5 West Chiverton, £33
1 East Basset, £21	50 New So. Caradon, 7s. 6d.	10 Wh. Edward, £1
25 East Chiverton, £4½	50 North Pool, £1	1 Wheal Buller, £39
10 East Lovell, £3½	20 North Phoenix, £1	20 Wh. Harriett, £1
35 East Seton, £1	20 North Robert, 11s. 9d.	50 Worthing, 10s. 9d.
5 East Grenville, £3 11 3	1 Providence, £43½	1 Wheal Seton, £215
10 East Caradon, £23 12s. 6d.	35 Port Phillip, £1 5s. 9d.	1 Wheal Seton, £215
5 E. Bas. & Grylla, 18s. 9d.	5 Pendenn, £2 8s. 9d.	5 Wh. Kitty (St. Agnes), £3 6s. 9d.
10 E. Rosewarne, £2 12s. 6d.	5 E. Providence, £2 16s. 9d.	30 Wheal Unity, 14s.
20 East del Rey, £1	10 East Gunnis Lake, £1	10 Wheal Union, £2 14 6
5 E. Trevelyan, £2 16s. 9d.	5 Fort Consols, £1	20 West Trevelyan, 7s. 6d.
10 East Gunnis Lake, £1	10 Fedn-an-drea, £1	2 Wh. Mary Ann, £11½
20 Fortuna, £1 3s. 9d.	100 Quabradra, £3¼	1 West Sharp Tor, £25½
1 Great Fortune, £29½	5 Rosewarne, £1	3 Wendon, £10½
1 Grambler, £14 18s. 9d.	10 Rosewarne Udy, 37s. 6d.	1 West Seton, £218½
50 Garreg, 2s. 6d.	50 Santa Barbara, 10s. 9d.	2 Wheal Kitty (Leland), £11½
20 Gt. So. Toigues, £4 8s. 9d.	5 St. John del Rey, £30	10 Yudanmutana, £3½
20 Glasgow Car., £3 17s. 6d.	25 South Grenville, £1	
5 Gonnemena, £2½	And is a BUYER of 200 Vale of Towry at 4s. 6d., 10 Wheal Ury at £3 17s. 6d., and 50 East Grenville.	
20 Great Busy, £4	2, Adam's-court, Old Broad-street, September 18, 1863.	
1 Herodafot, £39		
10 Hingdon Down, £2½		

### MESSRS. VIVIAN AND REYNOLDS, 68, OLD BROAD

STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS OF MINES, COMMISSION, AND GENERAL AGENTS FOR THE PURCHASE OR SALE OF MINE SHARES, RAILWAY, AND EVERY OTHER DESCRIPTION OF STOCK.

Commission on share transactions 1¼ per cent. on £100 and above, and 2½ per cent. on less sums.

### MR. EDWARD COOKE, SHAREBROKER,

75, OLD BROAD STREET, LONDON, E.C. Advice given on application on the merits of the various mines currently dealt in.

### MR. GEORGE BATTERS strongly recommends his friends to buy

Tincroft, West Chiverton, Chiverton, Herodafot, South Caradon, and Devon Great Consols for investment. These shares will pay good interest for money at present quotations.—5, Cowper's-court, Birch-lane, E.C.

### SHARES WANTED IN THE FOLLOWING MINES, or

state number and lowest price:—

Clifford Amal., £34	Treconer, £3	Grenville, £3½
Kitty (Leland), £11½	West Stray Park, £33½	West Caradon, £21
Gonnemena, £2½	Basset, £20	East Russell, £3¼
Grambler and St. Aubyn, £13½	Basset, £20	East Lovell, £3½
Rosewarne United, £11½	Drake Walls, £1½	South Frances, £65
East Basset, £280	East Carn Brea, £8	Wheal Seton, £215
Camborne Vein, £3¼	South Basset, £4½	South Crofty, £25
FOR SALE:—	25 Rosewarne Udy, £13½	10 Grenville, £25
10 St. Ives Wh. Allen, 25s.	15 Gonnemena, £3½	

Mining Offices, 77, Old Broad-street, London, Sept. 18, 1863.

### ROSEWARNE UNITED.—Shareholders will do well not to be

"bamboozled" by garbled and false representations. The merchants who supply remind one of "Kilkenny cats," whilst the adventurers in the locality take care that the mine is not robbed or plundered in any way. Again, therefore, support the present honest management, and study the interest of all.

H. B. RYE, Stock and Sharebroker.

Mining Offices, 77, Old Broad-street, London, Sept. 18, 1863.

### JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C.,

SHARES IN MINES BOUGHT AND SOLD on commission, at 1¼ per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

### JOSEPH GREGORY, STOCK AND SHAREBROKER,

2, HATTON COURT, THREADNEEDLE STREET, LONDON, E.C.

Commission on purchase and sale of mining shares, 1¼ per cent.

Bankers: City Bank.

### GEORGE RICE, SHAREBROKER, 1, FINCH LANE,

CORNHILL, LONDON (30 years' experience).

SPECIAL BUSINESS in East Caradon, East Carn Brea, East Russell, East Grenville, Tincroft, Wheal Grenville, North Crofty, Clifford Amalgamated, &c.

Money advanced on mining shares.

Sept. 18, 1863. Bankers: Bank of London.

### MR. G. D. SANDY, SHAREDEALER, No. 48,

THREADNEEDLE STREET, LONDON, E.C.

Business transacted at the closest market prices.

A correct daily price list will be forwarded on application.

### RICHARD CLIFT, MINE SHAREDEALER,

late of Redruth, now 48, THREADNEEDLE STREET, LONDON, where all letters are to be addressed.

### MR. T. ROSEWARNE, 81, OLD BROAD STREET,

LONDON, E.C., has FOR SALE:—

Brondyod, £4½	East Gunnis Lake, 37s. 6d.	North Downs, £2 1s. 3d.
Bryn Gwlog, £33	Lady Bertha, 12s.	Providence, £43½
Clifford Amalg., £34½	East Caradon, £28½	Sithney Carmuel, £3¼
Carn Brea, £71	Gonnemena, £3¼	South Frances, £65
Clujah and Went., £37½	Glasgow Caradon, £4½	Tincroft, £20½
Drake Walls, 40s.	Gawton, 5s.	Wheal Union, £23½
Devon Gt. Cons., £57½	Marke Valley, £6½	Wheal Unity, 15s.
East Russell, £37½	North Robert, 9s. 6d.	Wheal Basset, £21
East Carn Brea, £7½	Nangles, £24½	Wheal Arthur, 4s.

And is a BUYER of:—

Wheal Harriett, £2½	Wheal Margery, £3	Wheal Ury, £3½
Wendon Cons., £2½	Wheal Edward, £2 15s.	East Basset, £20
Great South Toigues, £4½	Drake Walls, 38s.	West Maria, 38s.

T. ROSEWARNE is happy to say that those parties who have taken his advice during the last fortnight in purchasing in those mines can now realise 100 per cent. profit.

Sept. 18, 1863. Bankers: Bank of London.

### MR. D. STICKLAND, M.E., having had upwards of 40 years'

mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

MINES INSPECTED and faithfully REPORTED ON. DEALER IN MINING, RAILWAY, AND OTHER SHARES.

His monthly "Circular" for September contains a selected list of Cornish and other mines. Forwarded on receipt of six postage stamps.

5, Finsbury-street, Finsbury-square, London.

### MESSRS. R. HORLEY AND CO., SWORN STOCK, SHARE, AND

MINING BROKERS, 45, CORNHILL, E.C. (late of 2, Royal Exchange-buildings), TRANSACT EVERY DESCRIPTION OF MINING BUSINESS, on commission only, and are in a position to obtain reliable information respecting all dividend and progressive mines.

### MR. T. P. THOMAS, MINING AGENT AND

AUCTIONEER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

Mr. T. P. THOMAS is always in a position to give the most reliable information as to Miners, North Miners, Central Miners, Cefn Clien, Pant-y-Fydw, Miners Union, and the Twelve Apostles Mines, and is prepared to BUY and SELL shares in each at close marginal prices.

FOR SPECIAL SALE:—20 Twelve Apostles, 50 Cefn Clien, 40 Pant-y-Fydw, and 30 Central Miners. Is a BUYER of 2 or 4 Miners shares.

VALUABLE FORFEITED AND OTHER MINING SHARES FOR SALE BY PUBLIC AUCTION.

MR. T. P. THOMAS has been favoured with instructions to SELL

BY PUBLIC AUCTION at Garraway's Coffee-house, Change-alley, Cornhill, London, on Thursday, the 24th day of September, 1863, at One o'clock, the following VALUABLE SHARES:—

398 Treweatha Lead Mine shares, forfeited for non-payment of calls.

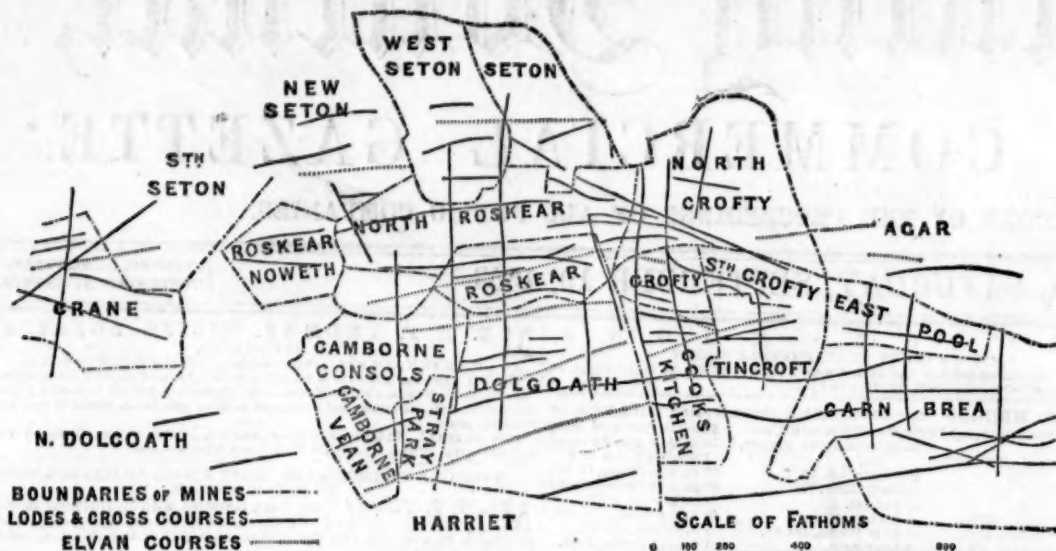
15 Hawkmoor. 10 North Robert. 20 North Dolcoath.

20 Havan Silver-Lead. 5 Nangles. 20 North Dolcoath.

10 St. Just United (Tin). 5 Wheal Mary Ann. 50 Tolvaaden.



## THE CAMBORNE AND ILLOGAN MINING DISTRICTS.



BOUNDARIES OF MINES  
LODES & CROSS COURSES  
ELVAN COURSES

Date.	Mine.	Copper ore.	Value.	Dividends.
1838 to 1862	Wheal Seton, Tons	71,855	£ 371,669	0 0
1848 to 1862	West Seton	52,334	343,796	0 0
1838 to 1862	East Pool	50,908	289,611	0 0
1838 to 1862	North Crofty	100,892	549,872	0 0
1838 to 1862	South Crofty	7,211	39,642	0 0
1838 to 1862	Carn Brea	182,136	1,065,971	0 0
1816 to 1862	Dolgoath	244,959	1,379,495	0 0
1829 to 1861	Stray Park	41,320	212,740	0 0
1836 to 1848	Harriet	9,030	34,320	0 0
1857 to 1862	Ditto (about)	2,000	12,960	0 0
1816 to 1862	Tincroft	106,124	439,208	0 0
1816 to 1862	North Roskear	161,566	775,836	0 0
1821 to 1860	South Roskear	37,807	215,391	0 0
1816 to 1862	Camborne Vein (abt)	31,000	156,000	0 0

This district, which with that of Gwennap and Redruth returns a larger quantity of copper ore than all the other districts of Cornwall and Devon together, is about two miles and a half in length and two miles in breadth, and it may be safely said that there is not a district in the world, covering the same extent of ground, in which mining is so much of a certainty. Of the mines figured in the above plans, six are paying regular dividends—Dolgoath, Tincroft, Carn Brea, East Pool, Seton, West Seton. Of these the first four had been worked, made profits, and abandoned, before the present working; in the present working the total outlay on them has been 170,407l., the dividends 877,572l., the present market value of the shares is 679,520l. Of the other mines nine have paid large dividends—North Crofty, South Crofty, and Wheal Crofty, which, when united, returned over 200,000l. in one working, and 78,000l. in another; Stray Park and Camborne Vein, which paid 200,000l. profit; Cook's Kitchen, which divided 300,000l.; Roskear, which as South Roskear, and (originally) Roskear, was one of the richest mines in the county, and in its last working returned 220,000l. worth of copper ore, independently of immense quantities of tin, and has just been re-commenced by a new company; North Roskear, which has paid 102,000l. profits; Roskearnorth, which was the Old Wheal Wellington, Old Weeth, and Parken Bowen, and made large returns. These mines are all now at work, and there seems to be every probability that each will again make very large profits. The other mines, which are all returning ore, and are four in number, are New Seton, South Seton, Crane, and North Dolgoath, all at the present moment in a position which warrants the expectation that with judicious and energetic mining they will amply repay the adventurers, and keep this district in its present position of the richest, in proportion to its extent, for copper ore in the whole world.

In his valuable "Remarks on the Geology of Cornwall and Devon," Capt. Chas. Thomas says, speaking of this district:—"In our own mining district, extending from Chacewater to Camborne, occupying a surface of about 6 miles in length, and averaging 2½ miles in breadth, a greater amount of felspathic rocks and secondary granites is, I think, to be found than in any other place of equal extent. From this district, which includes the Camborne, Illogan, Redruth, and Gwennap mines, has been raised at a low computation copper ore of the value of 30,000,000l. sterling. The present annual returns from this 15 square miles of surface is somewhere about 500,000l., equal to the produce of all the other mines in Cornwall and Devon. In addition to the vast amount of copper ores, this same district is now yielding annually, I think, about 10,000l. worth of tin, taking the price at 60l. per ton for black tin." This amount has more than quadrupled in the last few years, since in 1861 and 1862 Dolgoath, Cook's Kitchen, Carn Brea, East Pool, and Tincroft returned tin ore to the value of 316,424l. To the west of Crane Mine is Wheal Hartley, a promising

young mine. A few remarks on the principal points in the progressive mines may interest our readers, the dividend mines being known wherever English mining is heard of need no comment:—

**WHEAL CROFTY** is in 6000 shares; it was originally worked as Longclose, then Longclose and Dandane, and under this name is mentioned by Pryce, who wrote in 1778, as producing cobalt ore in quantity, and being rich for copper. Under the name of Longclose, it is mentioned by Borlase as one of the mines returning the largest amount of profit between 1718 and 1758. It was subsequently a portion of East Wheal Crofty, and when that mine was divided into North and South Crofty formed part of the South Crofty sett. A few months since the South Crofty adventurers determined to abandon this part of the mine, and it was immediately taken up by a powerful company, who at once proceeded to work it vigorously. About a fortnight since a lode was cut in a cross-cut at the 35, and at a distance of about 6 fms. from the main lode, the rich lode in the old workings, and parallel to it; this lode is now 9 ft. wide, about 5 ft. of it ore ground, producing 4 tons to the fathom. A few days after the discovery at the 35 the lode was cut equally good in the 24, west of Square's shaft, a lateral distance of 47 fms.; this lode has never been worked, and can be reached by short cross-cuts down to the 125 under adit. The great cross-course is the boundary of the sett westward, and although the parallel lodes in Dolgoath, Cook's Kitchen, North Roskear, and Seton all made rich against the cross-course, none of the lodes either in this or the adjoining sett of Roskear have been worked within 150 fms. of it. There can be no doubt that this is one of the most promising undertakings in the county.

**ROSKEAR**, in 6000 shares, is immediately to the west of Wheal Crofty, as before stated; this mine has returned immense profits in former years, and was all but paying cost when suspended, although tin was 15l. per ton cheaper than at present; in fact, it was never intended permanently to stop the mine, since a large amount of pit-work is now standing in the shaft. A large proportion of the adventurers in Wheal Crofty have taken up this mine, and there is, therefore, no doubt it will be vigorously worked.

**NEW SETON**, in 400 shares, was formerly part of West Seton, and is principally held by shareholders in that mine, but little has as yet been done here; the shaft is down to the 60, under adit, and the opinion formed of the sett by the shareholders may be best judged from the fact that the shares, 25l. 5s. paid, stand at 100l.

**SOUTH SETON**.—This is a promising mine, in 400 shares; the lodes are of fine material size; but it must not be forgotten that this district, especially the western part of it, is a deep one, and large returns of ore cannot be expected at shallow levels.

**CRANE** is in 861 shares; the operations here have been principally confined to one lode—the Crane or Roskear lode—on which a considerable amount of work has been done. This mine was abandoned in 1853, after having made considerable returns of ore for the shallow depth. The principal points in this mine now are the cross-cut, which is being driven at the 50 to cut the Brigant lode; this lode has never been seen under adit, where it is a remarkably fine lode, and has been taken away on tribute above the adit for several fathoms; the lode underlies very flat, and it will still be some time before it is cut at the 50. A short time since a dropper was cut through, which let down a quantity of water of a high temperature, and it is generally expected that this lode will make a very great point in the mine. In the 60, on Crane lode, the top of a branch of ore has just been cut through, and is gone down in the bottom of the level, this ore was for some fathoms worth 20l. per fm. The 70 and 80 will now be pushed on towards this ore ground. In the 30, 20, and 10, on this lode, the lode is looking well, and the mine altogether may be said to be in a promising condition.

**WHEAL HARTLEY**, not figured in the map, is directly west of Crane, on the same lodes. At the last meeting the mine was divided into 6000 shares. Some good machinery is being erected here; the old engine-shaft has been cleared up, and it is found that the workings, which as Old Wheal Pascoe produced considerable quantities of tin, reach in many places nearly to surface, a deep adit is now being driven, which has been a good bunch of tin ore a few fathoms behind the present end, and is now again producing good stones of tin and copper; this lode is the same as that of the celebrated Old Trevaunus Mine, which is directly west of Hartley, and made very large returns for copper. Competent authorities are of opinion that this mine will make large and lasting returns if vigorously worked.

**NORTH DOLGOATH** is in 5000 shares. In this mine the engine-shaft is down to the 65 on a very large lode, producing fine stones of copper ore throughout; in the 60, both east and west, the lode is ore throughout. This mine, which may be looked upon as a most promising adventure, attracted a very great deal of attention some time since on account of the large amount of silver gossan discovered; some of this gossan produced at the rate of 8000 ozs. per ton. A good gossan being one of the few indications which may be considered unfailing, a course of ore is expected in the depth here.

**CAMBORNE VEAN** is in 4600 shares; it is immediately west of Stray Park and Dolgoath, and has its lodes. Some years since this mine made very large profits from copper ore; it is now returning both copper and tin. An improvement has recently taken place in Cryll's shaft, at 6 fathoms below the 242 fathom level, where there is a leader of tin, 9 to 12 inches wide, worth 130l. per fathom for the length of the shaft, and which has caused a great demand for the shares, raising the price 150 per cent.

result in a greater degree than silver. In those alloys into which he introduces iron or platinum, other light coloured metals which are difficult of fusion, he prefers to bring the easily fused metals into a molten state, and then to mix those less fusible with them in the form of shreds, particles, fine wire, or thin plates. The metals used should be those which are most nearly pure as found in the market, it not being necessary to have them absolutely or chemically pure. He prefers, for example, the best Lake Superior copper, or copper deposited by the electrolytic process, which frees it from many impurities.

**ATTACHING SHEATHING TO VESSELS.**—It has long been known that the yellow metal sheathing is the most durable and keeps clean longer than any other, but in attaching such sheathing to iron ships, it has been found in practice that, owing to the contact of the two metals in the salt water, a strong galvanic action has taken place, so as to decompose and ultimately destroy the sheathing metal and the iron. To obviate this effect, it has been proposed to insulate the two metals by placing sheets of vulcanized India-rubber or other material between them, and various methods have from time to time been devised for attaching the sheathing without forming any metallic connection between it and the iron plates of the vessels, such as the use of ebonite rivets, or drilling holes in the iron plates, plugging them with wood, and nailing the metal sheathing thereto, both of which plans are open to objection on account of the weakening of the iron-plates consequent upon drilling so many holes therein, also on account of expense, and other reasons. Mr. William H. Muntz, of Millbrook, has patented an invention, which consists in attaching the sheets of India-rubber, or other insulating or "anti-galvanic" material, to the vessel's side, and the metal sheathing to the insulating material, by means of marine glue, or such other cement or adhesive material as will resist the action of sea water, instead of nailing or rivetting the same, as previously practised or proposed. He proceeds either by employing the waterproof glue or cement both for attaching the India-rubber or other impervious insulating material to the sheathing, and also for attaching the same to the ship's side, or he attaches the India-rubber to the metal sheathing by heat and pressure only during the process of vulcanization (as is well understood), and uses the waterproof glue or cement only for attaching the same to the ship's side. His claims are—firstly, for attaching metallic sheathing to iron or other vessels by means of waterproof glue or cement, combined with the interposition of sheets of vulcanized India-rubber between the ship's side and the metal sheathing; or of such other impervious insulating material as will prevent any galvanic action taking place; and, secondly, the attaching of such sheathing to wooden vessels by means of the waterproof glue or cement only, without the interposition of any other material.

**TRACTION-ENGINES.**—The invention of improvements in traction-engines or common road locomotives, which has been provisionally specified by Mr. Robert Faulds, of Glasgow, has principally for its object the propelling and steering thereof in a more efficient manner than has been hitherto attained. The invention consists, in the first place, in applying the propelling power (which may be obtained by steam-engine details arranged in any convenient way), two or more pairs of wheels, whereby the necessary "bite" of the ground will be obtained without excessive weight and other inconvenience, whilst the ascending of inclined roads, or the drawing of extra loads, will thereby be greatly facilitated. According to one modification of the invention, the driving-wheels are actuated by means of worms gearing with worm-wheels attached thereto or fixed on the axes thereof. These worms are, by preference, upon two parallel shafts, disposed horizontally and longitudinally, and driven by means of bevel gearing from a transverse shaft, or by spur gearing from a central longitudinal shaft, worked by the engine at a comparatively quick speed. Clutches, by preference of the frictional kind, are arranged in convenient positions for throwing the wheels on either side into or out of gear, and the engine or carriage can be steered or manoeuvred by these means, as the driving of the wheels on one side only will cause it to turn towards the opposite side; or the steering may be effected by means of a separate pair of wheels upon a bogie or swivelling frame, in connection with which provision may be made for causing the load to bear more or less upon them. According to other modifications, the driving-wheels may be actuated by spur or bevel gearing, with clutches for throwing them separately into or out of gear; or the propelling power may be applied to one pair, and be transmitted to the other pair or pairs by connecting-rods, as in railway locomotives. These improvements are considered to be advantageously applicable in making a common road locomotive to carry a heavy load, instead of, or as well as, drawing it upon another vehicle.

## Original Correspondence.

## MANUFACTURE OF LEAD.

SIR,—As I have heard a good deal about Mr. Baker's method of purifying slag lead, I took some interest in examining two pigs, said to be pure lead, exhibited by Messrs. Ransom and Co., Sheffield, in the Central Exchange, Newcastle, while the British Association held their last meeting there. I believe it is admitted by those who seem to know something of the properties of lead that when it is pure it is ductile, easily penetrated with the nail, and readily acted on by the atmosphere, especially a humid one, which converts the surface into a carbonate of a dullish, slightly white, appearance. Mr. J. A. Phillips says—"The lead of commerce often approaches chemical purity, and is then extremely soft and malleable. On exposure to the air, it becomes rapidly tarnished, and acquires a superficial coating of the carbonate of the protoxide." In the Central Exchange the atmosphere would be sufficiently charged with moisture and carbonic acid to act so, but the two pigs of lead in question are hard, scarcely yielding to the nail, very lustrous, and apparently to have quite resisted all atmospheric influences, which act so freely on pure lead. Perhaps some of your readers will kindly explain how this is, as I fear from these characteristics lead manufacturers would not find it a profitable lead for either white lead or sheet lead.—Sept. 14. A SMELTER.

## CRUSHING AND GRINDING QUARTZ.

SIR,—Some two centuries since a process of crushing minerals by firing them from a cannon against a hard surface was placed upon the records of the patent office by an ingenious inventor of the time, and after long practical experience Mr. Joseph Mosheim, of Dolgelly, has arrived at the conviction that this invention was based upon sound considerations, and that it is to a modification of this important suggestion that we must look for the problem as to the best means of profitably treating the gold ores of Wales. Having for some years followed the life of a gold digger in California, Mr. Mosheim has acquired sufficient practical knowledge to convince him that an unnecessary amount of expense would be involved by employing even the powerful projectiles of the present day for shattering so hard a substance as quartz by throwing it against a target, and he has hit upon the happy idea of avoiding the wear and tear of the cannon, and at the same time of saving the gunpowder which would otherwise be consumed, by availing himself of centrifugal force for superseding the projectile altogether. Mr. Mosheim's invention being patented, the public have the advantage of being able to obtain the description of the "improvements in machinery for crushing and grinding quartz and other substances" in Mr. Mosheim's own words; there will, consequently, be no difficulty in ascertaining the marvellous results accruing from the sound scientific training which, it is proverbial, the German miners undergo, coupled with practical experience in the New World. Upon Germany, the country of his birth, Mr. Mosheim reflects an amount of credit of which it may be proud, whilst the machine-loving Americans will, doubtless, recognise an amount of progress which no other American citizen has yet aspired to.

The nature of his invention, as Mr. Mosheim tells us in his specification, consists in combining in the same machine the two principles of crushing and grinding quartz and other substances. First, the quartz is crushed by centrifugal force, and then it is ground fine by suitable grinding machinery. With reference to the first operation, he observes that if a piece of rock or ore be let fall on to a hard surface from a given height it will, in proportion to the height from which it has fallen, be more or less broken to pieces. Now, if force be employed to throw a piece of quartz at, for instance, the velocity of 600 ft. per minute against a solid piece of iron, such a tremendous blow is given to the quartz that it will be thrown back and shattered to pieces, and in course of time, if the blows are repeated, the quartz will be reduced to as fine a state as may be required; but in order that every particle which escapes reduction by this operation may be reduced to powder, he places under the above crushing-machine a grinder, which acts on the plan of a grinding-mill. This grinder is constructed entirely of iron, and is kept cool by a continual stream of water, which is made to pass through its centre, entering a hollow shaft, filling all the empty spaces, and discharging itself below. The outside of the whole machine is also kept cool by water surrounding the said grinder in a tank. The shaft with part of the crushers and the grinders are set to revolve in one direction, whilst the hollow shaft with the other part of the crushers is turned the opposite way. To give the crushing wings a double action, he places another set of wings on the top of the first, running in the opposite direction, so that if a piece of quartz is thrown by the lower wing it is caught by the upper one, and rebounded to the lower, or on the grooved side, and so on continually until it is fine enough, then it is discharged through sieves. The stuff to be crushed is introduced through a hopper, and falls to the bottom; the centrifugal motion causes all particles to be carried instantly to the outer part of the wings, and there thrown either against the grooved sides, or against the upper wings, and re-thrown in the opposite direction. At the revolving bottom are placed several punched sheet-iron screens, to allow the fine reduced stuff to pass; this falls against the grinders, by which it is ground as fine as wanted, and discharged at the bottom. At the bottom of the grinder is a set screw with India rubber plates, by which the grinder may be so set as to grind close and fine, and to have some elasticity.

As Mr. Mosheim's machine is entirely novel in its character, I am sure there must be many of the readers of the *Mining Journal* who will be anxious to have a detailed statement of the number of tons of quartz which it will pulverise daily, and the power of the engine by which it is driven.

MECHANICUS.

## CORNISH MINES, AND SUPPLIES.

SIR,—I was glad to read the letter from Mr. Sims, in last week's *Journal*. So practical an authority was sure to place the matter in the right light. What more satisfactory arrangement, or effectual check, could be proposed than publicly advertising for a supply of the materials required for the mine? The course which adventurers should enforce at the London meetings is, that an arrangement be entered into as to the contracts to be announced; a committee, independently formed, should examine the tenders; and the most eligible of the offers be selected. There need be no antagonistic feeling, as no opposing interest would exist—the object of all being the success of the undertaking. Let us hope that the suggestion of Mr. Sims may prove the means of inaugurating a new system; that London managers may be induced to look to the well-doing of the mines placed in their offices, and thus create a better feeling in their favour, rather than tolerating the jobbery hitherto practised (as some in the county consider), for the sake of the limited gains attached. Messrs. the London Managers should consider that they are the shareholders' representatives, not the merchants' agents. A CORNISHMAN.

## CORNISH MINES, AND SUPPLIES.

SIR,—As an old man, I can endorse the sentiments of one of your correspondents of last week respecting the late Mr. John Taylor. It was he and his friends to whom the miners of Gwennap and neighbourhood were indebted for the revival of the mines in that locality. But for him in all likelihood that district would have remained a desolate wilderness, when, in 1821, Providence moved that man to take up the sets of Wheal Virgin, Casvey, and other extensive mines, which had withered and died out under the blasting mildew of "Gwennap rule" and the "great shop" payment of miners' labour, and which he with his agents, by their superlative management, brought again into active operation under the name of the "Consolidated Mines," and actually divided among the shareholders upwards of 250,000l. The leases, however, expiring, these mines were ruthlessly torn from his hands by parties who, not content to receive their portion of the regular "golden eggs," determined to seize the "goose" and have the whole; when lo! on opening the "goose" the "golden eggs" had vanished. The system of tendering for supplies was, of course, abolished, and those mines, after dragging out for some time a miserable existence, expired, and the district became again a dreary wilderness, which but for this arbitrary and unjustifiable act the "Great Consolidated Mines" of Gwennap, Cornwall might, perhaps, to this day have been at work under the Messrs. Taylor's management, making their regular bi-monthly dividends, and the whole district have enjoyed the prosperity of Camborne and Illogan. I mention this as one of my reminiscences of the success attending the skill and indomitable energy of this great man. I trust, Sir, that the great interest manifested by mining adventurers on the subject of supplies will not be allowed to rest or cool down until the whole system is thoroughly ventilated. I believe my London friends and the gentlemen at Leeds will insist upon it that all materials shall henceforward be purchased only by tenders, in spite of the merchant princes of Cornwall, and their "behind the scene" influences. Thanking you for the space you have already allowed

**HYDRAULIC MACHINERY FOR RAISING WATER FROM MINES.**—In ordinary hydraulic machinery, stuffing-boxes are used packed with hemp or cupped leathers, and frequently copper collars are employed. To enable stuffing-boxes in such machines to be dispensed with, and thereby to avoid friction at such parts, Messrs. Mawson and Whitehead, of Calverley, near Leeds, have provisionally specified an invention, according to which the piston, plunger, or ram, which is formed less in diameter than the bore of the cylinder in which it works, and to the bottom of said ram a piece or pieces of leather of semicircular form are affixed, so that the water, pressing against said leather, forces it against the circular bore of the cylinder, and makes a perfectly water-tight joint. They propose to form the said cylinder of a solid square piece of metal, bored out at its centre and open at top (having no stuffing-box), to receive the ram; an cylinder is to be fitted in an oblong cast-iron containing water; two small pumps, fitted with suitable valves, are also fitted in said cylinder, and said pumps are worked by a two-throw crank shaft for injecting water into the square cylinder above, for lifting the ram, and imparting motion to a long lever, an anti-friction roller being adapted to the head of the ram upon which the said lever rests; the short end of this lever has its fulcrum on a strong pin fixed in a standard, and the longer end of the said lever is connected to the pump-rod leading down the shaft of the mine, pit, or other place from which the water is to be raised. By these means a great saving of power may, it is said, be effected.

**TREATING MINERAL OILS.**—Messrs. Prentiss and Sellars, of Chester, have provisionally specified an invention, which has for its object an improved system of treating petroleum, or rock oil, coal oil, paraffin, and other like mineral oils, and the products therefrom, and consists in combining them with resin, resins, or other gums, and tallow, and other fatty matter, to improve the quality of these substances to better adapt them for burning, lubricating, detergent, and other purposes. When required for detergent purposes, it is preferred to saponify the compounds by the addition of any of the alkaline substances used for that purpose.

**ALUMINIUM BRONZES.**—The invention recently patented for Mr. Moses Gerrish, of Salem, U.S., consists in combining copper and aluminium with one or more light coloured metals within certain specified proportions, the copper and light coloured metals bearing to each other proportions varying from 50 per cent. of copper to 20 per cent. of light coloured metals to 95 per cent. of the first and 2 per cent. of the latter, while the proportions which the aluminium bears to the whole of the light coloured metal may vary from 10 to 95 per cent. By light coloured metals he means silver, zinc, tin, nickel, platinum, iron, or other light coloured metals, having substantially similar properties with those enumerated, or any desired mixture or alloy of any of them. To produce alloys which from their colour and fineness of texture nearly resemble gold, whence he terms the alloys chrysolids, he proposes—firstly, copper, 9189; aluminium, 616; and silver, 203 parts. Secondly, copper, 9241; aluminium, 57; and silver, 188 parts. Thirdly, copper, 9330; aluminium, 504; and silver, 166 parts. Or, fourthly, copper, 9400; aluminium, 450; and silver, 15 parts. These alloys he considers well adapted to the manufacture of watch cases, chains, and ornamental jewellery. By substituting zinc for the silver he claims to produce an alloy fit for machine bearings. He states that these zinc alloys are hard and tenacious, but are characterized by considerable shrinkage in cooling from a molten state, the last-mentioned alloy having considerably more shrinkage than either of the others preceding it. The said alloys have, when drawn into wires of about 1-30th of an inch in diameter, a tensile strength to the square inch of section in the preceding order of about 90,000, 103,000, and 84,000 lbs. To produce an alloy well adapted for gun metal, being hard, tenacious, laminable, and ductile, he uses iron or iron and zinc with the aluminium and copper, and states that the tensile strength of these alloys, when reduced to wire, varies from 52,000 to 107,700 lbs. per square inch of section. Where zinc or tin, or both, enter into the alloys in the place of silver, the colour of the resultant alloys is somewhat affected, and the lustre is diminished. In the following alloys nickel forms the third element of the composition of the first formula, and platinum the third element of the combination of the second formula, and he states that those alloys in which he introduces platinum are less affected by acids than are those in which silver takes the place of platinum. Neither the platinum nor the silver gives a high lustre to the alloy, platinum producing this



as to occupy in your Journal, I may perhaps trouble you once more with my thoughts on the subject of supplies and "count-house" arrangements, and then leave the matter to other and abler hands.

St. Michael's-alley, Cornhill, Sept. 15. AN OLD ADVENTURER.

#### SUPPLY OF MATERIALS—BALANCE-SHEETS.

Sir,—From letters which have recently appeared in the Journal, there seems to be an impression that in some mines there is not that care in the expenditure, in purchasing and carrying materials, &c., which would be the case with people's own property. I would suggest that there should be copies of all bills sent to the brokers connected with the different mines, and then every shareholder could at any time inspect them; and also, that there should be a regular balance-sheet of the profits and expenditure of every mine put in the Journal, say half-yearly. I believe that this would greatly increase the confidence of the public, and lead to the further development, and also opening up, of a very large number of mines, which otherwise may remain for ages without being worked, and which would pay enormous profits to the adventurers, and be a great benefit to the world.

Newquay, Sept. 17.

T. M. PASCOE.

#### APPLICATION OF PHOTOGRAPHY TO MINING.

Sir,—An idea has occurred to me, which certainly appears worthy of consideration, if not of general adoption, amongst mine agents and mine adventurers—I allude to the representation of the surface work by means of photography. It would prove the most ready means for the agent to explain what he has done, and would give the adventurers a better idea of his ability than any report which could be written.

I am aware that in the case of established mines the application of the art would be useless, unless to show the increasing size of the heaps of ore, because otherwise the appearance at surface would remain unchanged; but in the case of new, and even of progressive mines, it would be very valuable. In the case of the Welsh gold mines, for example, if the shareholders had photographs weekly, they could judge for themselves the number of men employed, and also of the ability with which the surface works had been laid out. I would not follow the suggestion so far as to teach the mine captains to photograph for themselves, because I think their time could, or, at least, ought to, be better employed; but as photographs can now be obtained from professional artists at about 6d. each, say, 5s. a week, would keep the adventurers well informed.

Again, in the event of railways, water-courses, &c., being necessary, photographs of the surrounding country, and of the proposed routes, might be useful; but as it will be only requisite for one series of views to be taken by each captain, there will be still less necessity for him to make the study of photography part of his practical education.

COLLIDON.

#### THE ROYAL SCHOOL OF MINES.

Sir,—Since your announcement in the *Mining Journal*, of August 29, that Sir Roderick Murchison had come to the very wise determination to offer the Professorship of Geology at the Royal School of Mines to Prof. Morris, I can assure you that both myself and other students have anxiously watched for the further and still more gratifying information that the offer has been formally made and accepted. The high opinion you have expressed of Prof. Morris's ability is acknowledged by all to be thoroughly justifiable, and whether we seek confirmatory evidence amongst the great geologists of the United States or of Germany, we shall find that there is no geologist in England whose opinions are so generally respected, nor any who would be considered a greater acquisition to a national academy.

I am sure that no student of the Royal School of Mines would for one moment wish you to attempt to prove that a more competent instructor than Prof. Ramsay could be found, yet I am constrained to state that more than one instance has occurred of students of the Royal School of Mines attending the lectures of Prof. Morris, and openly avowing that they have acquired more information from a short course of evening lectures by Prof. Morris than from the whole of the expected day courses at the School of Mines; and I can further state that even the paleontologist's assistants at the Geological Museum have not been above refreshing their memory (?) at the University College evening classes. I believe the students generally will rejoice if he is fortunate enough to have Prof. Morris for their instructor in geology, and I am quite sure that he will reflect honour on the establishment.

But it is not alone from Prof. Morris's undoubted ability as a geologist that his appointment to the Chair of Geology at the Royal School of Mines will be looked upon with satisfaction. There has hitherto been considerable aversion to the entire establishment from the prevailing feeling, and I am sorry to say that I fear it is not groundless, that all offices and preferments are monopolized by a clique, and that it is hopeless for an independent student to seek for honour. It is a common saying amongst the students that in the Royal School of Mines *la protection vaut tout*; and, without doubt, patronage has heretofore, to all appearance, been considered before merit; in witness whereof we need only refer to the names of the prizemen who have been appointed to Government offices in India, Australia, Tasmania, and elsewhere. It was feared, among the students, that the vacancy in the geological chair would have been filled by Mr. Jukes or Mr. Giesle, and either appointment would have been very distasteful, and would, to some extent, have made good the saying here that "the coney Scot at the helm is 'unco' glad to see a countryman in an exalted position," as the Grand Vizier of the Sultan said to the Russian ambassador (both being Scotchmen), after concluding the formal business of a diplomatic meeting.

As to the advantage which will accrue to the School from Prof. Morris's connection with it, there can be no question. It is well known not only to the officers of the Geological Survey, but to all identified with the mineral industries of the country, that there is a strong faction opposed to the school, because they consider it to be too much nursed; and as this faction has full confidence in Prof. Morris, I believe that in the event of his name appearing amongst the list of professors, a far larger number would give their countenance to the school, and many students would attend who are now kept away upon principle.—*Royal School of Mines, Jermyn-street, Sept. 16.* A STUDENT.

#### NON-PAYMENT OF CALLS.

Sir,—The question raised a few weeks since as to whether those who neglected to pay their calls did not obtain an advantage over those who do pay, which may be considered equal to a dividend upon the amount of their arrears, has been very ingeniously shifted upon the subordinate question of Cornish mines and their supplies. First the fraudulent measurement of timber was introduced, then the question of prices generally, and now it has degenerated into the relative merits of purchasing materials by tender and otherwise, the commissions exacted by mine captains, and so on; all of which, although important in their way, only prove the evil of arrears of calls better suffered to exist. It is very generally known that the salaries of mine captains and pursers (not only in Cornish but in other mines) form the smallest amount of their income, but I maintain it is the shortcomings of the adventurers themselves that tempt them to be dishonest. The adventurers do not supply them with the necessary funds for carrying on the mine in a straightforward manner, and the merchants then come in and offer (what is no doubt a temptation that cannot be overcome by the adventurers' agents) to share the plunder on condition of having the business of the mine, and not being too closely watched. The merchants put a sovereign in the agent's mouth to prevent him speaking, and a sovereign in each hand to prevent him writing, and the agent then suggests that one on each eye will prevent him seeing also. It is by gentlemen wearing such ornaments as these that the money of mine adventurers is almost invariably expended, and simply because calls are permitted to remain in arrear, and the company is thus left in an embarrassed position.

I cordially coincide with the remarks in last week's Journal, that some advantage results from requiring tenders, but tenders to supply goods on long and indefinite credit are of very little utility, for the committee are compelled to decide, not in consideration of the price and quality of the goods offered, but according as the merchant is in a position to give long or short credit. This system is equitable enough for defaulters, because they have credit to pay for anything; but it is most unjust towards the prompt-paying shareholders, because they pay ready money, and have to buy at credit, and worse than simple credit prices, in consequence of the insolvency of the company with which they are connected. Excepting some 20 mines, there can scarcely be found a mine adventure in the country so nearly approaching solvency as to be able to purchase for ready money, and choose its own market. The merchants who feed upon the adventurers are far less blame-worthy than the adventurers themselves. The merchant must have a profit proportionate to his risk, and as this risk is indefinite, it behoves him to take the greatest care that he does not fix his scale of profits too low. The adventurers, on the other hand, have embarked in an undertaking, on the condition that all shall contribute equally to provide the necessary funds, yet manage their affairs so loosely that they ruin the mine, and not unfrequently themselves also, simply to show their philanthropy to defaulters, who laugh in their sleeve at the leniency of their paying co-partners, and pocket the 15 per cent. profit which this leniency secures to them.

Pursers, bankers, merchants, and captains of mines, may be content with the present system, because it "puts money in their purse," and defaulters may be averse to change upon the same grounds, but the loss to those who do pay is almost greater than can be estimated, for not only are they deprived of the intrinsic worth of their money, but mines which, carried on with ready money, would be highly remunerative, are abandoned as hopeless, through being carried on upon the present credit and underhanded system. The injury which the non-payment of calls inflicts on the mining industry of the country is greater than most people suppose, and I fear we can hope for little improvement until the executive of mines have the means of procuring the payment of all calls made as promptly as they obtain payment of good bills of exchange—at three days' grace, and are thus enabled to buy everything in the cheapest market, and for ready money.—Sept. 17. Cash.

#### WHEAL LUDCOTT, AND ITS MANAGEMENT.

Sir,—Twelve months have now elapsed since this mine was brought prominently before the public, absorbing all attention, and reaching the fabulous price of 120,000 for the mine, or 25l. per 4500th share. On a calm review of facts and results, it would seem that the whole affair was a complete bubble, and that the serious losses which have been sustained are mainly owing to the delusive reports and promises of interested parties. It is a fact that almost every agent who inspected the mine ridiculed the extreme opinions of its advocates, and the price of shares; but at the time referred to the manager affirmed to many parties that he could see his way clear to pay large dividends, that the shares were cheap at 20l., and at that price the mine could pay a good interest as South Caradon for three years to come. Upon the strength of such opinion and statements, I am informed that many parties at Liskeard and elsewhere bought shares at from 20l. to 25l. Now, let us look to the result:—In October, 1862, a 10s. dividend was paid, and in January another 10s. dividend; but in April there was a sudden collapse to 2s. 6d., and in July the silver had fled, and there was a loss on the three months' working of 1400l. How should this terrible collapse take place in so short a time? There is only one conclusion, and it is this—some parties were cooking the public, and lining their pockets well. But what are the Ludcott shareholders

thinking about now? At the last meeting only one distant shareholder was present. At the next meeting a 10s. call must be made, with every probability that the mine must be stopped in a few months. North Trelawny, the next mine, is stopped, and, as a consequence, Ludcott must take all the water. At head quarters it has been asserted that another bunch of silver may be met with. This is certainly a pretty state of affairs for those who have suffered so deeply. The idea appears absurd, and contrary to analogy. Why do not the shareholders attend the next meeting in force, and have the mine inspected by Capt. Chas. Thomas beforehand, as to its further working and prospects? Wishing that one mine may one day be successfully worked, I say knock it now, or pass it into different hands.

SHAREHOLDER.

#### ST. IVES WHEAL ALLEN.

Sir,—In the Journals of the 5th and 12th inst. there appeared an advertisement from Mr. Thomas Carter, of Camborne, offering shares in the above mine at 25s. per share. On both of these dates I wrote Mr. Carter, agreeing to take these shares; but to this date I have received no reply. I think it right to inform you of this, that the shareholders and others may not be misled by supposing that the shares are being offered at such a price without finding a purchaser. I may add that I hear others have also written for the shares with a similar result.

H. S.

[We have received several similar communications from other correspondents.]

#### Meetings of Mining Companies.

##### WHEAL GRYLLS MINING COMPANY.

The ordinary quarterly meeting of adventurers was held at the account-house, on Monday, and was very numerously attended.

Mr. PETER WATSON in the chair.

Mr. DUNFORD (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

A statement of accounts for the quarter, ending with the costs for June, was submitted, from which the following is condensed:—

Black tin sold .....	£4268 5 6
Mine cost .....	£2022 15 9
Merchants' bills .....	853 8 3
Interest and incidental expenses .....	8 18 9
Dues .....	288 10 8 = 8123 17 2

Leaving profit balance .....

The assets exceeded the liabilities by 1462l. 9s. 3d.

The report of the agents was read, as follows:—  
Sept. 14.—Fisher's Lode: During the last three months the 40 has been driven east 8 fms. 2 ft., and a rise commenced in the back and risen 2 fms., also driven west in this level 7 fms.; this ground will set at a low tribute as soon as the rise is holed to the level above. The 30 has been extended 16 fms.; the lode in the end at the present time will just pay for driving, which is 4l. per fm.; a certain part of this ground will be taken away by tributaries when the winze is holed from the 20. The lode in this winze is worth 5l. per fm., sinking at 2l. per fm., and is down 3 fms. below the 20; in the bottom of this same level there is another winze just commenced sinking, the lode in which is worth 6l. per fm. The 20 from surface is driven 10 fms.; the end is suspended for the present, and the back set on tribute at 10s. 6d. The 10 has been driven 10 fms. south 18 fms. 3 ft.; this cross-cut will intersect the south lode, which is in whole ground from this level to surface, and if found productive will greatly enhance the value of the mine. Jones's winze-shaft is sunk 4 fms. 2 ft., and is now down 26 fms. from surface; this shaft, when communicated to the deep adit, will enable us to drive the adit level and cross-cut north, where some other lodes are known to exist.—Standard Lode: The 30 is driven east 6 fms.; the lode is small, but will work at a high tribute. In the 19 we have driven east 16 fms. 3 ft., and risen 3 fms., and holed to Mill Pool old workings, which will enable us to set some tribute piches at about 10s. in 17.—Georgia Lode: The engine-shaft has been sunk 1 fm. 5 ft. 6 in. below the 20; the shaft is engaged cutting clatern pit, &c., in order to fix a 20-fm. drawing-lift, and when done we shall commence sinking immediately for a 30. The 20 is driven north 18 fms.; the last 5 fms. is through a lode worth 6l. per fm.; the lode in the end at the present time is worth 8l. per fm.; price for driving, 2l. 10s. per fm. In the bottom of the 10 there is a winze sunk 3 fms., through a lode worth on an average about 50l. per fm., which is its present value; sinking at 6l. per fm. In this level there are two stopes working, by ten men, at 7l. per fm.; the lode in each stope is worth 27l. per fm. In the back of the 33 we are stopping at 4l. 10s. per fm.; the lode is worth 20l. per fm. In our tribute department the setting for September is as follows:—Eight men at 4s. in 17, three men at 5s., six at 6s., six at 7s., six at 7s. 6d., seven men at 9s. and twenty men at 10s. In the 30, at a standard of 60l. per ton, the tributaries paying all expenses. At surface we have fixed twenty additional trunks, made a large reservoir for supplying the lower part of the dressing-floors, added fixed launders and other requisites for the same, likewise made a new winch and erected it at Jones's shaft, cleaned and adit 62 tons 19 cwt. 3 qrs. 5 lbs. of black tin, amounting to 4268l. 5s. 6d. We have 270 persons employed in and on the mines, 62 of whom are engaged underground on tutwork. As regards future prospects during the next quarter, we consider our raising will be about 60 tons of black tin, which will leave the usual profit of 350l. per month.—EDWARD ROGERS, JAMES POPE.

The Chairman said the present was the first meeting that had been held upon the mine since it had been in a dividend-paying condition. The committee had thought it desirable that an opportunity should be afforded to the shareholders to visit their property, and to see for themselves what had been done in the way of providing the mine with plant and machinery, and the actual position which the property occupied. Those of them who knew the mine some three or four years since would remember that at that time it had neither pumping-engine nor stamps; but now it was provided with two effective engines and 24 heads of stamps, also with ample and efficient dressing-floors. He need hardly say that the providing a mine with these things occasioned a very considerable outlay; but, notwithstanding, there had been made but two calls upon the shareholders—one of 10s. to pay for the pumping-engine, and the other of 1l. to pay for the stamps and the laying out of the floors. But in that way there had been expended on account of machinery and plant at least 5000l., and as the amount paid by the shareholders did not exceed 1500l., it was clear that the difference between that amount and the outlay incurred must have been met and liquidated by the returns from the mine, or, in other words, that the mine had been provided with that which should properly have been paid for out of capital, instead of out of revenue. In a railway company, or any other commercial undertaking, the cost of machinery, plant, &c., was always defrayed by capital—that had been the case in Wheal Grylls, the shareholders would by the present time have received 4l. or 5l. per share more in dividends than they had, for fully that amount over and above the calls made had been expended on account of plant and machinery. (Hear, hear.) During the last quarter, notwithstanding the present meeting, Mr. James Pope had presented the profit amounting to 1189l., out of which the quarterly dividend of 1l. per share was declared, absorbing 1024l., and leaving to be carried forward an undivided balance of 160l.; the profits during the past quarter had amounted to 1146l., from which the committee felt themselves fully justified in recommending the usual dividend of 1l. per share, carrying the remainder forward, and thus increase the undivided balance by 122l. He might, perhaps, mention that had it not been for the fall in the price of tin in the last three months the profits realised during that period would have amounted to at least 1800l., and not only had the profit been thus diminished, but he had been troubled by their agent, Capt. Rogers, that there had been an additional plant of at least 300l., the whole of which had been charged and paid for out of the quarterly profits. It afforded him a great deal of satisfaction to be in a position to inform the shareholders that the committee had been promised an addition to the sett eastward and southward, whence, it was confidently expected, the most satisfactory results would be realised—indeed, the ends approaching those points were already in productive ground. (Hear, hear.) He was glad to see around him so many gentlemen who were thoroughly acquainted with the mining history of the district, because it afforded shareholders an opportunity of eliciting much valuable information otherwise unobtainable. There were many who could well recollect the time when the mine was a desolate wilderness, and when the property when it was worked as the Old Wellington Mines, from which copper ore in considerable quantities was returned, and he hoped the day was not far distant when the profits of Wheal Grylls would be augmented by returns of copper ore, as the property was known to contain an abundance of that mineral. (Hear, hear.) He concluded by moving that the report be received and adopted, and the accounts passed and allowed.

Mr. EDWARD COOKE said that upon the present occasion he represented a large number of his clients and friends who were interested in the success of this mine. As he had been the means of introducing those parties to this undertaking, he need hardly say that it afforded him great satisfaction to find that during the past quarter, notwithstanding a fall in the price of tin, and an increased expenditure on account of additional plant, an average amount of profit had been realised. Some two or three years since, before he identified himself with the mine, he sought and obtained the opinion of Capt. Teague, of Tincroft, and by his advice he (Mr. Cooke) had associated himself with the undertaking. So far from regretting that association: and he was speaking on behalf of his friends—he looked upon it with pride and pleasure, for it had proved remunerative to them and satisfactory to himself. (Hear, hear.) The property now being brought into a position to pay legitimately-earned and periodical dividends, without working the mine too fast, as he feared was too frequently done. Upon this point they not only had the assurance of their agents, but the confirmatory testimony of other accredited authorities. It might, however, be satisfactory to the shareholders if he were to avail himself of the opportunity of enquiring of Capt. Rogers as to the amount of tin ground that had been taken away since the last meeting. It was the more necessary to have some definite information upon that point, since as was always the case with prosperous mines, certain insinuations had been thrown out—it was always better, he contended, for those who had objections to raise, or information to elicit, to attend the general meetings, for by doing so much misapprehension would be removed. Now, he wished to ask Captain Rogers what was the estimated value of the present reserves? (Hear, hear.) He wished it to be distinctly understood that he did not ask this question for his own satisfaction, for he had the most implicit confidence in the management by the agents; the estimates given were always fully realised, and an opinion was never expressed except with the utmost caution and deliberation.

Captain Rogers stated that the bottom level at Georgia was not yet under the tin ground, which was to be accounted for by the fact that the tin ground dipped northward. He expected that the rich part of the tin ground gone down in the level above would be reached in about 4 or 5 fathoms. So far as the reserves were concerned, although he had not gone into their estimated value, yet he felt he could with confidence compute them as being worth above 20,000l. If they did not open any more ground for the next six months, they would be able during that period to return as much tin as had been returned during the past half-year.

Mr. DUNFORD stated that he had known Capt. Rogers for many years, and his experience of him was that, if he estimated the reserves at 20,000l., the shareholders might rest perfectly satisfied that their actual value considerably exceeded that amount.

Mr. G. LAMINGTON enquired when the stamps first went to work?—The Chairman replied that the stamps went to work in 1842, but a month's delay had arisen from the bursting of a boiler.

Mr. G. LAMINGTON wished to know what quantity of tin had been sold, and the amount realised since the period when the stamps went to work?—The Chairman replied that there had been sold 345 tons, which had realised 23,007l. He (the Chairman) would reiterate what he had stated on previous occasions—to challenge any person to name any mine that had been worked for the last 100 years that had produced such a quantity of tin with twenty-four heads of stamps, as had been, and was being, produced at Wheal Grylls. He would mention mines in the Camborne district, provided with forty-eight heads of stamps and more powerful machinery, that were producing not more than 5 or 6 tons of tin per month, while Grylls, with only twenty-four heads of stamps, returned between 1024l. (12 per ton) was then formally declared.

A quarterly dividend of 1024l. (12 per ton) was then formally declared.

The committee of management were unanimously re-elected, with thanks for past services.—The Chairman acknowledged the compliment in appropriate terms.

Mr. F. HILL (of Helston), the agent of Mr. Grylls, stated, in reply to a question from

the Chairman, that he believed he might state there would be no difficulty in Wheal Grylls adventurers securing the additions to the sett for which application had been made. The St. Aubyn and Grylls sett had been revoked, and he could assure the meeting that the interests of the Grylls as well as that of the East Grylls adventurers would be on every occasion considered, and that they would have good reason to be fully satisfied with the additions to their sett. (Hear, hear.)

A vote of thanks to the Chairman was passed, for having presided upon the present occasion, and for his continued attention to the interests of the shareholders.

The Chairman having thanked his fellow-shareholders for the vote, congratulated them upon the satisfactory and profitable position which their property occupied, and concluded by expressing his hope and belief that the profits would increase as the development of the property was extended. (Hear, hear.)

The business of the meeting having thus been disposed of, the usual "count-house dinner" took place. Mr. PETER WATSON occupying the chair. It was attended by several gentlemen of the locality, all of whom were more or less interested in the success of the mine. The cloth having been removed, and the customary loyal toasts drunk.

The Chairman rose to propose the toast of the day—"Success to Wheal Grylls." He need hardly say that upon the present occasion they met under very agreeable circumstances—to participate in the continued prosperity of their enterprise. (Hear, hear.) At the general meeting, over which he just had the honour of presiding, he had shown, by the most satisfactory evidence that could be adduced—the sales of tin—how this property had, from its own resources, provided nearly the whole of the mechanical appliances wherewith to develop its mineral treasures, and how it had divided, and was continuing to divide, among its proprietors, a very handsome reward for the comparatively small outlay incurred. He had shown that in a short space of time there had been sold 345 tons of tin, which had realised no less than 23,007l., and that, although there had been expended upon the property, in machinery and plant, something like 5l. per share—paid for out of the returns—there had been divided among the shareholders a very handsome percentage upon their investment; and he could only reiterate his conviction that they would for many years to come meet each other to participate in the prosperity of Wheal Grylls. He was pleased to see present, if not the largest, one of the largest, tin smelters in the county of Cornwall, as from him they might, perhaps, be able to elicit an opinion as to the prospects of the tin trade. He referred to Mr. R. R. Michell, of Marazion. (Hear, hear.) He concluded by proposing "Success to Wheal Grylls," which was drunk with the usual honours.

The next toast was—"The Lords of the Soil." In proposing it, the Chairman said he was glad to say that they had present Mr. Hill, a partner of Mr. Grylls; and Captain Bight, who represented the Duke of Leeds; and their friend, Mr. Michell, one of the lords of Grylls and East Grylls. "The Lords of the Soil" was then drunk.

Mr. F. HILL responded. He said it had been his happiness and privilege to have been associated with the Grylls family for many years, as also with Mr. St. Aubyn, who represented an interest in this mine. He (Mr. Hill) felt peculiar gratification in being present upon this occasion, because it afforded him pleasure to find that the shareholders were so well rewarded for their outlay. Wheal Grylls, he considered, was another instance of the fact that success was to be obtained when the operations were characterised by discretion and zeal, for, unfortunately, they too frequently found that capital was expended indiscreetly, and, therefore, without success; but in Grylls they had a striking and satisfactory example of the successful results of zealous and discrete exertions in the expenditure of capital. He could not refrain from remarking, however, that everyone connected with this mine was greatly indebted to the energy and ability of their esteemed Chairman, Mr. Peter Watson, for without his well-directed exertions Wheal Grylls would not now have been in its present enviable position. (Hear, hear.) They all knew what a favourable effect one good mine like Grylls had upon the whole district, giving encouragement to others to employ their capital in the development of its resources. As to the lords, it had not only been their duty but their pleasure to give every encouragement to bona fide mining. As an evidence of that, he mentioned an instance where a mine on the estates of the Duke of Leeds had been brought into a dividend-paying condition, but his Grace, upon being offered the dues, remarked that, although it was true dividends were being paid, as the shareholders had expended a great deal of money in bringing the property into that position, he should decline to accept the royalty; and notwithstanding that the dues were only 1-18th, none were paid for some time after the mine had been in a dividend-paying condition. (Hear, hear.) He (Mr. Hill) regarded it as the policy of the landowners to encourage in every possible way bona fide mining, and to discourage anything like irregular mining. So far as Wheal Grylls was concerned, his friend, Mr. Peter Watson, who generally succeeded in all he undertook, had had considerable difficulty in arranging the several claims of the smaller lords. He (Mr. Hill) could assure them that the policy pursued by the Duke of the small landowners in that district was by no means calculated to benefit its mining character. (Hear, hear.) Instead of asking and exacting exorbitant terms, which he knew had been the means of stopping and destroying good mines, they should for their own interest, be united in one common principle, which could not fail to benefit themselves, by having their property developed. He was aware that his friend, Mr. R. R. Michell, had exercised a very beneficial influence in this direction, having done his utmost at all times and seasons to promote the mining interests of Cornwall. (Hear, hear.) Before sitting down, he wished to propose a toast, which he knew would be received with a hearty response. It was the health of the indefatigable, able, and worthy Chairman, Mr. Peter Watson (hear); to whose great and unceasing exertions every one connected with this mine owed a deep debt of gratitude. The present must, indeed, be a happy one to him, surrounded as he was by friends who had come some hundreds of miles, not only to congratulate him upon the great success which he had achieved, but to participate in that prosperity; and all he (Mr. Hill) could say was, that although merit did not always command success, in this particular instance the success had been well earned, and was deservedly meted out. He then gave "The Health of the Chairman," which was drunk with enthusiasm.

The Chairman, who on rising was received with the most flattering marks of approbation, stated that any language he could employ could not adequately convey the feelings of gratitude and pleasure he experienced upon the present occasion. All he could say was, that he most heartily thanked the whole company for the exceedingly flattering way in which the toast was received, and assured them that ever since he had been connected with this company he had done his utmost to advance its prosperity; and it was with unalloyed gratification that he found his exertions so well rewarded. (Hear, hear.) It afforded him pleasure to meet his fellow-shareholders upon the mine, to show them what had been done, and what it was proposed to do. As to their agents, Capt. Rogers and Pope, it was impossible to get more straightforward, zealous, or able men; their interest was identical with that of the general proprietary, and it was their pleasure, no less than their duty, to promote it in every possible way. There were employed, at the present time, about 270 hands, and every detail was conducted economically and satisfactorily. (Hear, hear.)

"Absent Shareholders" was the next toast drunk, which was followed by "The Neighbouring Mines."

Mr. ABRAHAM BENNETT, whose name was coupled with the toast, responded in appropriate terms. There could be no doubt that Wheal Grylls was but one of many mines in that district that might be brought into the same prosperous position, if energy and capital were but adequately and discreetly employed. He recollected Sir Henry De la Beche saying in that room, some years ago, that this was one of the finest mining districts in the county of Cornwall. Wheal Grylls, it was to be remembered, was surrounded by mines that had produced enormous returns, but during the last forty or fifty years the district had been neglected. Previous to that period Prof. Michell used to ship off more ore than any other port in the county; and many around that table had seen Prof. Mount crowded with ore, from mines that were producing from 400 to 600 tons per month. Therefore he did trust that the time was not far distant when this district would resume the activity and industry it displayed in "the days of yore." (Hear, hear.)

"The Health of Mr. Dunford" was the next toast, which was responded to in a speech of humour and point.

Mr. DUNFORD then proposed "The Health of Mr. R. R. Michell." They knew that Mr. Michell was one of the lords, but he had been to them more than a lord. Mines, like individuals, sometimes had periods of difficulty, and when friends were needed. Wheal Grylls had had its period of difficulty, when it found a steady and considerate friend in Mr. R. R. Michell. He did not mean that Wheal Grylls required financial friend; but did require real diplomatic friend, than whom no better could be found than Mr. R. R. Michell. (Hear, hear.) The toast was drunk with enthusiasm.

Mr. R. R. MICHELL, in responding, said he had always felt the greatest interest in Wheal Grylls, and all he could say was that he hoped it would be more prosperous than hitherto, of which there seemed every probability, from the favourable prospects which it presented. As regards the tin market, he thought there were better times coming, and that tin would realise a much better price before many months had passed.

Mr. E. COOKE proposed "The Health of the Purser," which was duly responded to.

Mr. DUNFORD next gave "The Health of the Agents."

Capt. ROGERS, in responding, stated that the mine was looking exceedingly well, and he had no doubt would be able to return during the current quarter 60 tons of tin, which he thought was the best report he could produce. (Hear, hear.) So far as East Grylls was concerned, he fully believed, with time and economy, it would make a mine equal to Grylls. (Hear, hear.)—Capt. Pope thanked the assemblage for having associated his name with the toast. He assured them that the best would be continued to be done to advance the interests of the shareholders both in Grylls and East Grylls.

Mr. A. BENNETT then gave "The Mining Brokers."

Mr. EDWARD COOKE, whose name was coupled with the toast, in responding, thanked the proposer for the complimentary manner in which the mining brokers had been mentioned. It was quite true that it was, in a great measure, through them that mineral properties became developed, as they were the medium by which capital was supplied for that purpose. He considered it the duty of all who profess to direct the public to desirable investments in mining property to make themselves well acquainted with the merits of the various mines in which they are interested. This knowledge could only be obtained by occasional visits to the mining districts. For his own part, he always felt great pleasure in coming into Cornwall, and especially to visit Wheal Grylls, as his connection with it had been of a most satisfactory character, to his friends as well as to himself. He felt very confident, however, that Wheal Grylls, prosperous as it had been, would, when further developed, be found much more productive than hitherto. With regard to the district generally, he did not consider that it had yet been fairly tried, and he feared it was in some measure to be attributed to the want of unanimity among the various owners of the land around the Marazion district, and the difficulty in inducing them to believe that it was to their interest to be liberal in their terms—neither endeavour to exact premiums nor to look for exorbitant dues from those who were willing to embark their capital on speculation to develop the mineral resources of their property.

All present to-day might have heard what was being done, and the large quantity of tin that has been and was being returned from this mine. No doubt there were other properties in the same locality that would prove equally as productive in the future. He most of all help saying that it was through the instrumentality of his friend the Chairman that he first became connected with Wheal Grylls, some two or three years since, and he was glad to say that in a pecuniary sense it had been highly profitable both to himself and friends, some of whom still held, at a comparatively low price, a large interest in the mine. (Hear, hear.)

"The Agricultural Interest" was responded to in graceful terms by Mr. JOHN BUNNAGE, of Barmosse.—Some other toasts having been drunk, the assemblage dispersed.

#### EAST WHEAL GRYLLS MINING COMPANY.

A general meeting of proprietors was held at the Wheal Grylls account-house, on Monday.—Mr. PETER WATSON in the chair.

Mr. W. WATSON (the purser) read the notice convening the meeting, and the minutes of the last were read and confirmed.

A statement of accounts, including the July cost, was submitted, which showed a credit balance of 1635l. The agent's report was read.

The Chairman said it was 18 months since that he directed his attention to this property, since which period judicious operations had been carried on in the adit level and other parts of the mine. At the last general meeting, three months since, it was thought desirable to purchase adequate machinery for the purpose of effectually developing the property in depth. At that meeting a call of 1l. per share was made, and since then a 24-inch cylinder engine, and 20 heads of stamps, &c., had been purchased for 525l. That amount had been charged in the accounts just submitted, as



promising for a permanent and paying mine. The prospects are of a most encouraging



ore to the fathoms; and easier for driving, and letting down a great deal of water, which, if it continues as at present, will soon leave the 43 quite dry, and also strongly indicates a loose and productive lode between those two levels. The 43, south of Lagg's shaft, has been driven 9 fms. through a good course of ore, from 2 to 4 ft. in width. The stops just commenced here promise to yield large quantities of ore, so that we shall at once begin to make larger returns. By end of present month we hope the 33 cross-cut, in the same manner, will be at least 100 fms. down, and shall make out a good lode. Quantity of ore returned during the month, 140 tons, of higher percentage than in former months. We expect to do better during the coming month, as we have been thrown back in our returns by having a great deal of new work to do, and also some repairs to the machinery. The dressing goes on much the same; an unusual quantity of rain has been much against our working out of doors. The two furnaces have turned out about 100 tons of good regulus during the month; 50 tons 17 cwts. have been delivered to the Copper Company. We have 49 tons of regulus on hand, and about 150 to 300 tons of ore at grass. The calciner is being built as fast as possible. All the other works are going on well.

**BON ACCORD COPPER.**—Adelaide, July 25: The letter of the Chairman of the committee acknowledges the receipt of the instructions sent from England, to resume operations at the mine at a greater depth (the committee, in a resolution passed by the shareholders, have decided to sink the company, held on May 22 last), and states that the committee are losing no time in endeavouring to obtain the services of a properly qualified person to proceed to the mine, and to make a thorough examination of it, preparatory to recommending the sinking of engine-shaft, and the prosecution of mining operations at the depth of 60 or 70 fms. The Chairman of the committee writes—"The committee have very carefully considered your instructions, and they will be carried out as far as possible to the letter. I expect the first thing the committee who examines the mine will require will be to have the engine set to work, for the examination of the mine will be made by sinking the shaft to the depth of 60, what the prospects are of finding a payable vein by sinking to the 60 or 70."

**PORT PHILLIP AND COLONIAL GOLD.**—Mr. Bland, dated Clunes, July 23: "The quantity of quartz crushed during the four weeks in June was 2953 tons, yielding 11 lbs. 17 dwts. of gold, or an average of 7 dwts. 20 grs. per ton. The receipts were 19677. ozs. of gold, or an average of 6 dwts. 12 grs. per ton. The balance at the end of the month was 7311. 0s. 9d. Mr. Bland states: "The above is but a poor month's return, the receipts being but 13s. 8d. per ton. We cannot account for the continued low yield, excepting that the Clunes Company must be raising quartz from some poor bands, which they will doubtless shortly get out of, as they have done before. We are crushing larger quantities, and to keep us fully supplied they are raising material from all parts of the mine now opened out. Some of the foreheads are probably in quartz not worth the raising, and which lowers the general average. It is satisfactory to know that the present low yield is due to the low level of the mine, and not to the quality of the quartz raised from the lowest levels. The yield from all the mines at Clunes has been fluctuating much of late. The Victoria Company's mine, to the north, has diminished, while the Clunes United Company's quartz, to the south, has greatly improved. The balance at my disposal at this date is not sufficient to be worth remitting, which I am sorry for, as I prefer remitting something every month. The quantity of quartz crushed during the four weeks ending July 11 was 3132 tons, yielding 1402 ozs. of gold, or an average of 8 dwts. 22 grs., being a considerable improvement in the quantity of ore crushed, as well as in the yield of gold. I can tell you that the same is the case at the Richmond mine. "The clearing up yesterday (finished this morning) shows a great improvement in the yield. The exact increases we cannot tell till after the amalgam has been retorted off."

**FORTUNE COPPER.**—The company have letters from Fremantle, dated July 23, advising that the exact quantity of copper ore on board the *Isenay* was 126 tons and that 80 tons still remained at Champion Bay awaiting shipment. Capt. Penberthy's report from the mine is dated June 29. He states—"The sinking of the old working shaft from the 20 is progressing very favourably, and the new engine-shaft has been sunk and timbered about 4 fms. All other workings are the same as when I last wrote you. We have dressed this month 14 tons of copper ore and 11 tons of lead ore."

**SCOTTISH AUSTRALIAN.**—July 21: Respecting the Lambton Colliery and Railway, the viewer reports that the earthworks of the railway have been completed, and the permanent way laid to within 10 chains of the pit. With very few exceptions, the whole of the materials sent from home arrived in very good order, and having had considerable use, they are now being used in the most judicious and economical manner. Mr. Morehead, the superintendent, observes—"The railway and appliances, to which Mr. Croudace's attention recently has been almost exclusively devoted, seem to be approaching very near to completion. . . . The Government are arranging to afford great additional facilities for the shipment of coal from the port of Newcastle." At the Cadianglung Mine the limited surface operations were being continued. At the Canobias Mine operations have consisted principally in sinking engine-shaft, and not much has been done in the way of raising ores. At the West Caddis Mine, Capt. Holman reports that the sinking of the engine-shaft is proceeding at the rate of 12 ft. per week, of an average quality of 12 per cent. At the smelting works the difficulty in getting wood, arising from the prevailing wet weather, continued to retard operations. The worst part of the season being now over, they hope soon to see a simultaneous increase in the production of ore, and in the supply of fuel with which to smelt it.

**TRACTION-ENGINES FOR THE YUDANAMUTANA MINES.**—The *Orient* has brought out three traction-engines and a large quantity of other machinery, consigned to the Yudanamutana Mining Company. The consignment consists of three 10-horsepower traction-engines complete; 24 wagons, capable of carrying 5 tons each; four travelling houses, and a quantity of spare machinery in case of accident. They are from the establishment of Messrs. Aveling and Porter, machinists, of Rochester, in which town the engines have been tried with a successful result. The *Orient* will discharge this consignment at Port Augusta, and it is expected that the engines will be in operation within a fortnight after landing. The engineer, Mr. John Anthony, brother to Capt. Anthony, of the Blinman Mine, arrived by the *Great Britain*, and the sub-engineer and 10 men, who, we believe, assisted in making the engines, have come out by the *Orient*. The engines and wagons, as we mentioned some time ago, will be used to convey the ore from the mines to Port Augusta, between which termini the country is very well adapted for the purpose. It is expected that they will travel at a uniform speed of five or six miles an hour, and houses for the accommodation of the men will form part of the train, so that they may be able to travel during the night when moonlight, the men taking turns, as on shipboard. This spirited enterprise is worthy of great praise, and we trust that the success which it deserves may be realised. —*South Australian Register*, July 23.

The traction-engines for the Yudanmutana Company have arrived by the *Orient*, which is now unloading the portion of her cargo for Port Adelaide, and afterwards will proceed to Port Augusta with the engines. They are expected to be on the road the early part of September. The road to and from this company's mines is quite alive with the drays bringing in the copper ore. There is at present a large quantity of ore at grass, and the workings are being extended so as to have a sufficient supply for the engines, and to keep the drays fully employed.—*South Australian Advertiser*, July 27.

By the last mail from Chili we have accounts of extraordinary discoveries in some of the mines, both for gold and silver. The Descubridora Gold Mine is not far distant from the Checo Mine, which is being worked by the Copiapo Mining Company. The following is an extract from the Valparaiso paper with reference to these discoveries:—

"We have some extraordinarily good accounts to give of some mines in the North of the Republic. In the silver mines Loreto-y-Dolores Terceira the metal is said to be found in a pure state, and in such abundance that the owners can extract as much as they like. Respecting the gold mine Descubridora de Remolinos, a Colapio newspaper says—"The richness of this mine, belonging to Sr. Torre Bianco, is such as to form an epoch in the annals of our mining business. We are informed that the principal vein is 2 or 3 metres wide, with ramifications on both sides; the depth cannot yet be ascertained. As the working of it progresses its proportions increase, and the quality grows better and better. The best ore gives about 3000 marcos to the cajon, or 64 quintals, which is equal to about \$280,000, and the very lowest descriptions yield 100 to 200 marcos. The bankers will find themselves rather short of money when Sr. Torre Bianco asks them to buy a small quantity of gold—some 10 or 20 quintals. It is said that he has the peculiar idea that he will not realise any profit on the gold he has extracted about 2 or 3 cajons of the best quality, but that he will realise 1000 quintals of gold. He has already turned out into bars, be of so great a value that hardly any house in the country would be able to pay cash for it. Tradition places the discovery of this mine so far back as to the past century, when it was the property of a Don Pedro Fraga, who got enormous wealth from it. As the mining version runs, the gold contained quartz, instead of as ordinarily is the case the quartz containing gold. It is said that this Sr. Fraga turned out to be a fraud, and that the mine was sold to Sr. Torre Bianco, who has been favoured with the Order of San Carlos. On account of Sr. Torre Bianco's mine having turned out so splendidly, nearly all the neighbouring district is directing its attention to the working of mines."

**BRITISH COLUMBIA GOLD FIELDS.**—Accounts from Victoria, Vancouver's Island, to July 21, give most encouraging particulars. The Beatty Company are taking out from 80 to 120 ozs. per day. Moffatt Company took out 90 ozs. yesterday and 120 ozs. the day previous. The Never-Sweat Company continue to take out between 80 and 90 ozs. a day. The Watty Company is paying 100 ozs. per day. The Bald Head Company's ground continues to pay as richly as ever, averaging over 100 ozs. per day. The first week up to June 14 they washed out \$12,960, the largest amount taken out in one day was 188 ozs. Their average expenses of working one shaft is \$1000 per week and they expect to take out from \$15,000 to \$20,000 per week from the present and another shaft which they will soon be working.

**CANADIAN GOLD MINING.**—The *Quebec News* states:—"We hear that a great rush has been made for the gold mines in the county of Beauce, about 35 miles from Quebec, and that at present there are upwards of 1000 people at the diggings, which are said to be exceedingly rich. The gold district extends over a distance of 40 miles. The paper states:—"The reported richness of the gold mines of the Beauce district is more than verified by persons who have arrived in town with specimens of the deposit. A gentleman from Ottawa, who went to visit the locality, showed us yesterday some fine nuggets, weighing nearly an ounce of pure gold; and he informs us that lump much larger in size have been washed from the banks. About 200 persons were at work and others were flocking to the place. With a second California at our door, it is strange how little excitement it creates. We learn from the Lower Provinces, too, news of the yield of the gold. A correspondent writing from Sherbrooke, St. Mary's, under date of Aug. 16, states:—"The tons of quartz from the Cummings land were taken off and sent away last week, and yielded a precious metal. This is the product of five men's labour for six days, at a depth of 15 ft. from the surface. The quartz was not picked, but sent to the crusher as it came from the lead, which is a large one, and easily worked."

An artificial system of fecundating grain, the idea of a Dutchman, has been lately brought before the notice of the French Government. Experiments have been tried, and found remarkably successful. The process is merely steeping a long piece of fringe, or some such like piece of manufacture, in honey (no doubt any other less expensive saccharine matter will do as well), and dragging the same over the standing corn when the pollen is ripe: thus at once easily effecting impregnation.

**THAMES TUNNEL COMPANY.**—Receipts for the week ending Sept. 12  
584 11s. 8d.; number of passengers 14,061

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending September 13 was 11,0037 7s. 10d.

**HOLLOWAY'S PILLS—COMFORT FOR THE AFFLICTED.**—When the blood becomes impure through breathing foul air, or through the imperfect performance of any bodily function, the greatest benefit will be derived from these pills, whose purifying, alterative, and tonic virtues are too well known to need any commendation here. After taking a few of these pills, discomfort will be felt from day to day; the appetite will grow better, the stomach stronger, the liver wholesomely active, and the bowels more regularly regular. While taking these pills there is no danger of catching cold. They have the rare and valuable property of completing their salutary purpose without involving the necessity for the habitual employment of purgatives. Holloway's pills neither grip nor produce other unpleasant effects.

## **AUSTRALIAN MINES.**

Aug. 1.—The total returns amount to 134 tons 19 cwt., at an average assay of 83½ cts. of silver per ton. In San Pantaleon some improvements in the ground have occurred since the date of the agent's report, written a week since. I am pleased to learn that the ore from the San Juan shaft, where the ground is better, is yielding some 6 or 7 cwts. of good ore per ton and in virtue of a favourable change having taken place in the ground, we fully believe this will continue to improve. A change for the better has also taken place in No. 5 winze, San Juan, and in No. 3 stope, in back of the level below San Ricardo. With such good indications, I can confidently count on an improved ore return for the present month. When underground at Cornubia shaft, a few days since, I was much pleased to find a very decided improvement in the lode; the ore branch was 8 in. wide, and an assay of the ore gave 457 cts. of silver per ton. The ore from the No. 1 shaft, which is 5½ lbs. of cube silver per ton, were produced, equal to 13 bars—38 bars, previously sent to Guatemala, realised £28,874. [A remittance of 1600*l.* in bills has been received in London.]

**EAST KOSOGORAG—D. T. Macdonald, Sept. 4:** South Sundu: The presence of sill in the quartz band, and till that it has passed through it, the fact that the quartz band is not so well exposed—Ramsdell: The south vein continues to yield silver in small quantities very regularly. On the whole, the most productive point is the shaft, and this is very encouraging. The vein in the cross-cut north is, as formerly reported, split into two branches, one averaging 6 inches and the other 2 inches in width, and distant from one another about 1½ ft. The large branches are separated by a distance of 100 ft. The small branch is 100 ft. long and 2 ft. wide, and is a good deal richer in silver than the rest of the vein. The small branch is a good deal richer in silver than the rest of the vein. The small branch is a good deal richer in silver than the rest of the vein.

**AUSTRALIAN MINES.**  
ADELAIDE, JULY 25.—The price of Copper is unaltered this month. The Burra Company dispose of their copper by tender, and 87*l*. 15*s*. and 88*l*. were obtained by them in this manner. The Wallaroo and Moonta Companies have made sales at 88*l*. per ton at Port Adelaide. In Coal there has been no change of prices. English coal has been sold at 2*l*. 15*s*. and New South Wales at 2*l*. 6*d*. per ton. In metals, galvanised iron continues firm and scarce. The market for tin is quiet. Wire is much wanted, and a little on hand sells readily at 15*l*. to 15*l*. 10*s*., if bright, although it is offered cheaper to arrive. Tinned is not worth so much by 10*s*. to 20*s*. per ton.

**KAPUNDA.**—**July 26:** The quantity of ore raised in May was 267 tons, of 19½ per cent. average produce, equal to 52 tons of pure copper, exclusive of 130 tons of sulphur ore for flux. The quantity raised in June is estimated at 300 tons of good quality. The sinking of the Buhl engine-shaft to the 70 was being continued with more rapid progress. The tributers were well employed in the working pitches, and the ore raised are of better quality. At the smelting works the cessation of rain allowed the wood-cutters to send large supplies of fuel; the furnaces and refinery were in thorough repair, and in full work. About 50 tons of copper were made during the month, and the management expect that in the remaining months of the year he would be able considerably to reduce the large stock of ores on hand. A parcel of 96 tons of copper ore had been forwarded to Malbourn for transshipment, and 21 tons more would follow by the next steamer.

**ENGLISH AND AUSTRALIAN COPPER.**—Port Adelaide, July 27: The stock of fuel was—at Koorlinga, coals 843 tons, wood 3480 tons; at Port Adelaide, coals 2312 tons. There were four furnaces and one refinery at work at Koorlinga, and four furnaces and one refinery at the Port Works. Since the date of the last advices a shipment of 31 tons 7 cwt. copper has been made to India.

**YUDANAMUTANA COPPER.**—Capt. Anthony, July 17: Yudanamutana Mine: The lode in Mary's shaft is large, and has every appearance of making a good one but is yielding only a small quantity of ore. We are raising some excellent ore from

Gleason's lode between Henry's shaft and the "Big Bunch," this is quite new. The Gleason's lode: The level driving south of Henry's shaft is still opening patches of ore ground that will pay to work. The stope south of Henry's is yielding a fair quantity of rich ore.—Section 1397: During the past month we have driven the 10 several fathoms of small branch of very rich ore. The quantity of ore raised during the past month is small, and we have taken the advantage of having a good stock on hand to facilitate the working of the "Big Bunch," by driving a level under it, otherwise the yield would have been just the same as last month's. On the whole, these mines are not quite so good as they were during last month.—Wheel Blinnman: The stope south of No. 1 shaft is 8 fms. deep, and is yielding a fair quantity of good ore. The Big Bunch is without change, yielding just the same quantity as last month, and of equal quality. In driving the cross-cut, from No. 2 shaft, we have passed through a good grey lode; we are now driving above it. The stope south of the 10, south of Jane's shaft, is still very good, and yields a fair amount of ore. The stope south of the 10, south of John's shaft, is pretty much the same as last month's yield. On the whole, the mine is fairly good. It was last month: The company's superintendent at Adelaide, under date July 27, writes as follows:—"Two men have just come in from Blinnman Mine, and they state that in No. 2 shaft a fine lode of solid grey ore, from 3 to 4 ft. wide, and very rich, had just been cut. The ore is said to be over 60 per cent."

**GREAT NORTHERN COPPER.**—Charles Bonney, Adelaide July 25: The mail dispatched from Nuoculena, and which should have arrived in Adelaide three days ago, has, from some cause with which I am unacquainted, not been received up to the present time, and in consequence of this delay I am unable to furnish you with a report from Capt. Garland this month; but a report has come down that a very good bunch of ore has been cut, and that they had raised 3 or 4 tons of ore in a very short time. I have every reason to believe that the report is well founded; the only question is in what part of the mine the ore has been found. They had ceased driving in the 20th and, therefore, I presume the ore must have been obtained either in No. 2 level or in the level below it. It may prove to be in the latter place, because I think it is more probable that the ore is there.

**WORTHING.**—Advices have been received from the acting manager, dated July 22. The 53, south of Legg's shaft, has been driven 3 fms. through a good lode of ore; the lode in the present end about 3 ft. wide, and will yield 3 tons of rich yellow











**IRISH MINE SHARE MARKET.**—The shares of our mines have been generally neglected. An extra effort was made to keep those of the General Mining Company for Ireland in something like good repute, and, therefore, a few transactions have been effected to support the last quotation of 4*l.* 6*s.* (4*l.* paid), at which price, no doubt, more might be procured if required. Mining Company of Ireland shares were enquired for at last price, of 19*l.*, but holders are firm, and waiting better prices; therefore no business was done in them. A contemporary of Dublin has corrected a clerical error of ours in last week's Journal, saying that we quadrupled the price of the new Wicklow Copper Company's shares in order to arrive at the value of the old shares of the now defunct Wicklow Copper Mining Company's shares. The "initiated," and likewise the uninitiated, will perceive that we were perfectly correct in the price which was quoted by us for the new shares, as well as in the percentage of the rise in the price for the preceding fortnight, therefore none of our readers could have suffered loss by our trifling mistake; in fact, if we assume the new shares to be of the officially quoted paid-up value of 2*l.* 10*s.*, in lieu of 5*l.* per old share, it follows that the present price of 12*l.* 17*s.* 6*d.* per share should be multiplied by six to arrive at the equivalent of an old share, which but recently stood at 48*l.* However, these being mere ideal speculations, of no great practical value, we think it more in our province to explain that the nominal unit capital of the Wicklow Copper Mining and the Hibernian Mining Company is now divided into 17,000 shares, of the assumed paid-up capital of 2*l.* 10*s.* per share, and that each of these shares is now freely bought at the price of 12*l.* 17*s.* 6*d.*, as above mentioned. That the landlords of the old Wicklow Copper Mining Company—the Hibernian Mining Company—have made the best of the bargain is self-evident, because they have now three readily saleable shares for every one of the old description, which before the amalgamation were, so to say, unsaleable; but by the new arrangement the united Wicklow Copper Company are their own landlords, instead of the old company, having had only a very few years left of their old mining lease at a considerable royalty. That our contemporary should have discovered one nominal error is hailed



by us with pleasure, as a pledge that he will pay increased attention to Irish mining, which requires only that support from local journals which we have given it for years past in order to raise it to that standard of estimation which we think it deserves. Very little impartial local attention to the system of management of some of the leading or, in point of capital, more important mining companies will, we feel confident, very soon elevate Irish mines in the estimation of English capitalists, who, according to precedents in many other branches of legitimate industry, will have to give impetus or encouragement to our more timid, though not less wide-awake, monied speculators.

The Clowance Wood Copper Mining Company has been formed upon the limited liability principle, and with a capital of 25,000*l.*, in shares of 1*l.* each, for the purpose of working a sett in the parish of Crowan, bounded on the south by the celebrated Crenver and Wheel Abraham, north by Wheel Clowance and Rosewarne Consols, and west by Binner Downs and Wheel Treasury. The sett is 500 fathoms long by 400 wide, and is held from the Rev. H. M. St. Aubyn, at a royalty of one-twentieth. The purchase-money has been fixed at 5000*l.*, of which 1500*l.* is to be paid in cash, and the remainder in paid-up shares. The property has been inspected and favourably reported upon by Captains Charles Thomas, Joseph Vivian, William Pascoe, John Nancarrow, William Tregay, Edward Chegwin, Samuel J. Reed, and Mark Reed, all of whom concur in pronouncing it to be a promising undertaking. The mine is situated almost entirely in virgin ground, and in close proximity to mines that were formerly very extensively and productively wrought. Capt. Charles Thomas expresses his surprise that it has not before now had an effective trial. Capt. Joseph Vivian considers it a very valuable speculation. Capt. Pascoe does not know a sett more favourably situated, and equally encouraging opinions are expressed by the other agents who have inspected it.

The Liverpool Lead Works Company, with a capital of 25,000*l.*, in shares of 10*l.* each, is formed for the purpose of manufacturing lead and other metals, and purchasing Mr. Jabez Jones's patents for the manufacture of tea-lead with a surface coating of tin. It is considered that by means of this patent an extensive trade can be carried on in the manufacture of thin lead coated with tin, for capsules and other purposes.

The Patent File Company have given notice that they will close the subscription list, and proceed to an allotment, on the 30th instant. We understand that the company has been well supported by the investing public, and that the number of shares subscribed for has justified the appointment of directors to carry on the undertaking. The company, as will be seen from the advertisement in another column, has been formed to manufacture files by machinery in lieu of hand labour, whereby the cost will be materially reduced and the quality improved. It is founded on the experience of similar undertakings in successful operation in France and Belgium; and as the directors and officers of the company are practical men, of the highest respectability, every confidence is entertained that the results will be satisfactory.

The Ottoman Government has ordered a survey of the Nazbe lignite mines in the province of Aidin, near the Smyrna and Aidin Railway. More activity prevails in the mining department in the shape of prospecting and demands of concessions, and there is every appearance that mining will wake up; but it has had a long sleep. This arose from the Government having been persuaded to adopt French regulations, which, instead of promoting mining, as they expected, prevented any one from engaging in it. The mining of Turkey consists at present of some silver working in Asia Minor, copper working in the Toba district, iron working by gipsies in Ramellia and Asia Minor, coal mines at Herabla, in Asia Minor, emery and chrome working in the same district, and a very little silver-lead working. The whole empire is a vast deposit of mineral wealth.

At Truro Ticketing, on Thursday, 6020 tons of ore were sold, realising 25,107*l.* 7*s.* The particulars of the sale were:—Average standard, 119*l.* 6*s.*; average produce, 5*l.*; average price per ton, 4*l.* 3*s.* 6*d.*; quantity of fine copper, 349 tons 4 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Aug. 20.....	5173	118 8 0	5 3/4	£ 8 0	78 14 0
" 27.....	2872	118 7 0	5 3/4	5 0 0	76 11 0
Sept. 3.....	3253	115 14 0	7 3/4	6 4 0	75 12 0
" 10.....	2177	115 8 0	6 3/4	4 16 0	73 6 0
" 17.....	4020	119 6 0	5 3/4	4 3 6	71 18 0

Compared with last week's sale, the decline has been in the standard 1*l.*, and in the price per ton of ore about 1*s.* 3*d.* Compared with the corresponding sale of last month, the decline has been in the standard 5*l.* 2*s.*, and in the price per ton of ore 4*s.* 6*d.*

At the Wheal Grylls meeting, on Monday (Mr. Peter Watson in the chair), the accounts showed a credit balance of 1463*l.* The profit during the quarter amounted to 1446*l.* A dividend of 1024*l.* (1*l.* per share) was declared. The report of the agents and the details of the meeting appear in another column.

At the Great Wheal Vor United Mines meeting, on Wednesday (Mr. G. Noakes in the chair), the accounts made up to the present time showed a balance in favour of the mine of 4164*l.* 10*s.* 9*d.* A dividend of 2*s.* per share was declared. Details in another column.

At the New Birch Tor and Vitifer Consols Mine meeting, on Sept. 11, the accounts for the six months ending June showed a credit balance of 749*l.* 18*s.* A dividend of 2*s.* per share was declared. The reports were most satisfactory.

At the Boscon Mines meeting, on Sept. 8, the accounts for the quarter ending June showed—Balance from last audit, 398*l.* 19*s.* 8*d.*; tin sales for three months, 1990*l.* 3*s.* 7*d.*;—Expenditure for three months and losses, 2185*l.* 4*s.* 1*d.*; leaving to credit, 1392*l.* 19*s.* 2*d.* Mr. S. York, the purser, said: "It will be seen from the financial statements of the last two quarters that the balance in favour of adventurers has been reduced from 408*l.* 6*s.* 4*d.* (March 6) to 1392*l.* 19*s.* 2*d.*, making a deficiency on the six months of 2144*l.* 1*s.* 2*d.* This has occurred through the outlay necessary in the new works; also through the tin ground having failed to assist our returns of tin in the 40. I consider the mine has improved since our last account."

At the East Wheal Grylls meeting, on Monday (Mr. Peter Watson in the chair), the accounts, including July cost, showed a credit balance of 1635*l.* Details in another column.

At the Wheal Margery meeting, on Wednesday, the accounts for four months ending June showed a debit balance of 686*l.* 18*s.* 2*d.* A call of 1*s.* per share was made. The mine has much improved of late, and important discoveries have been made. The last sale (340 tons) of copper ore, which realised 321*l.*, was not taken credit for in the account. The reserves of copper and tin are estimated at the value of about 10,000*l.* The report of the agents was of a very satisfactory character. Importance was attached to the fact of the bottom levels being driven under the rich courses of ore gone down in the levels above. It was stated that the mine had not looked so well for the last two or three years; and if it continued to improve as of late, it was considered not unlikely that the payment of dividends would be commenced during next year. The mine is provided with two steam-engines, stamps, pitwork, &c.

At Roskear Mine meeting, on Monday (Lieut.-Colonel Money in the chair), the affairs were approved. The undertaking was divided into 6000 shares, and it was arranged that it should be conducted upon the cost-book principle. Mr. James Lanyon, of Camborne, was appointed purser, and Capt. H. Skewis was appointed manager. A call of 10*s.* per share was made, payable forthwith to Messrs. Williams and Co., Miners' Bank, Camborne, or to the purser. Every share in the undertaking was subscribed for.

At North Roskear Mine meeting, on Tuesday, the accounts showed a debit balance of 1430*l.* 7*s.* 8*d.* A call of 2*s.* per share was made. Captains Vivian, Angove, and Hoeking reported upon the various points of operation.

At the Roskearnoweth Mine meeting, on Tuesday, the accounts showed a credit balance of 219*l.* 12*s.* 4*d.* Captains Vivian, Angove, and Hoeking reported that they had completed Wheal Wellington engine-shaft to and are looking out for a suitable engine. They are driving the 70, 50, 24, and 12 levels west on North Roskear main level, which is large, and producing occasional tons of copper ore, but not sufficient to value.

At Frank Mills Mine meeting, on Sept. 10 (Mr. W. T. Smith in the chair), the accounts showed a credit balance of 1088*l.* 4*s.* 9*d.* Captains Nicholls and Cornish reported that all their machinery was in first-class working order, and the mine throughout in very good repair. Underground and at surface they present a scene of much activity, and they consider that they have not been in a better, if as good, position for the last twelve months. They hope to sample the same, if not an increased, quantity of lead ore for the current as they did for the last two months.

At Great Caradon Mine meeting, on Wednesday (Mr. J. E. Mathew in the chair), the accounts for the three months ending July showed a credit balance of 25*l.* 9*s.* 10*d.* A call of 2*s.* per share was made. Capt. F. C. Harper reported upon the various points of operation.

At the East Agar Mine meeting, on Wednesday, the accounts showed a debit balance of 316*l.* A call of 1*s.* per share was made.

At the West Wheal Kitty (St. Agnes) first general meeting, on Thursday (Dr. Whitworth in the chair), a call of 5*s.* per share was made, and the undertaking was divided into 5000 shares. A 36-in. engine is to be erected at once, and active operations will be commenced to develop this sett. Capt. Joseph Vivian, who has been appointed the manager, expressed himself highly pleased in meeting so many gentlemen that day who came forward to start a mine in a district that had been neglected many years, it being some years since one of the most flourishing and prosperous mining parishes in Cornwall. He would do his utmost to promote the interest of the company, and bring this mine to a successful issue.

At West Beam Mining Company meeting, on Sept. 9 (Capt. R. Husband in the chair), the accounts were submitted, and the Chairman pointed out the necessity for the 10,000*l.* worth of preference shares to be taken to provide for the development, requesting the shareholders to consider what additional inducement should be offered beyond the 10 per cent. preference dividend already offered, and found insufficient to procure subscriptions for them. Dr. Gillon could not bind himself to any period when a dividend might be expected. Capt. W. Hoeking reported that he had never seen the mine in such efficient working condition as at present, and is confident, from experience, that fresh extension in new ground is all that is necessary to enable a resumption of such riches as have at times gained for the mine such celebrity. It was resolved that the directors be authorised to issue the preference shares upon such terms as they think

proper, and it was suggested that the preference should be permanent, and at the rate of 20 per cent. per annum; the ordinary shareholders to participate in surplus profits. Messrs. Whitworth and Co. write that 6000*l.* of the preference capital has been subscribed for since the meeting.

At the Wheal Uny meeting, on Wednesday (Mr. P. L. Hinds in the chair), the accounts for the three months ending July showed a credit balance of 434*l.* 6*s.* 6*d.* Captains Davy, Cooke, and Rogers reported that they had sold in the past three months about 64 tons of black tin, and looking at the present prospects they hope to return about the same quantity in the ensuing quarter. In the north part they have not made great discoveries of copper lately, but they consider their prospects in this part very encouraging, and have full confidence in having something good in the western ground. In this part there are 11 tribute pitches working on copper, by 22 men, at tributes varying from 6*s.* 8*d.* to 13*s.* 4*d.* in 1*l.*

At North Levant Mine meeting, on Sept. 11, the accounts for the three months ending June showed a debit balance of 673*l.* 1*s.* 6*d.* The loss on the three months' working was 474*l.* 18*s.* 4*d.* A call of 5*s.* per share was made. Captains Bennetts and Thomas reported upon the various points of operation.

At the Maundlin Mines meeting, held at Liverpool, on Thursday (Mr. McColl in the chair), the accounts for the six months ending July were passed, and a call of 3*s.* per share made to pay off existing liabilities, and for the further prosecution of the mines.

At Wheal Hope two-monthly meeting, yesterday (Mr. J. Y. Watson, F.G.S., in the chair), the accounts showed liabilities over assets 490*l.* 11*s.* 1*d.*, and a call of 5*s.* per share was made. An estimate of the next two months is 30 tons of lead, beside blende, which will about pay cost. A committee of management was appointed, consisting of Messrs. J. Robertson, of the Stock Exchange, J. Andrew, and J. Y. Watson.

At the Fortune Copper Mining Company of Western Australia (first general) meeting, on Wednesday (Mr. Thomas Doon in the chair), the report of the directors and accounts were unanimously received and adopted. Details appear in another column.

The directors of the Nova Scotia Land and Gold Crushing and Amalgamating Company (Limited) have received (through Messrs. Robert Brooks and Co.) two ingots of gold, weighing together 74 ozs. 11 dwts. 12 grs., making, with the previous remittance, 107 ozs. 12 dwts. 12 grs., the produce of their crusher at Sherbrooke. Their crushers at Wine Harbour and Tangle being now about ready for working, a regular monthly remittance may be anticipated.

At the London India Rubber Company meeting, to be held on Oct. 16, the accounts will show—Outstandings due by the company and bills payable 1628*l.* 2*s.* 6*d.*, to meet which there is cash at bankers and in hands 1622*l.* 11*s.* 8*d.*, and stock (India rubber, &c.) 2377*l.* 17*s.* 3*d.* The litigation in connection with the purchase was satisfactorily settled in 1862. The directors proceeded to procure the additional machinery that was necessary, but suffered disappointment from time to time in the completion of the contract for it; and it was not until the middle of August, 1862, that manufacturing operations were commenced, when a large quantity of material passed through the preparatory stages, and matters were steadily progressing from this time until Oct. 25, at which time the company were on the point of putting their goods on the market, when a fire occurred, destroying a large portion of the buildings, entirely disabling the machinery, and consuming the greater portion of that part of the stock that was in process of manufacture. It was hoped that two months would have sufficed to re-erect the buildings and machinery, but some unforeseen difficulties delayed the settlement with the insurance company; and although every exertion was made by your directors to obtain a speedy settlement of the matters, it was not until March that a final and satisfactory arrangement was made, the insurance company undertaking the re-erection of the buildings, and paying the sum of 2375*l.* 12*s.* 6*d.*, being the amount awarded to this company, by arbitrators agreed upon by both parties, for the destruction of fixtures and damage to machinery. The works having been re-erected, the arrangements of the buildings and workshops much improved, the fixtures restored, and the machinery thoroughly repaired, manufacturing operations were resumed on July 20, 1863, and every effort is now being made to push the sale of the company's goods. It appears that of the 7500 shares into which the capital of the company is divided, 2600 shares were allotted to the vendors, 1400 were taken by the directors and their friends, 1971 by the general public, and 1629 remain unallotted. At the forthcoming meeting a call of 1*l.* 13*s.* 4*d.* will be recommended on the preference shares. The arrangement with Mr. Hall, the manufacturing manager, has been modified, and will be submitted to the meeting for approval. With the exception of the salary taken by Mr. Stephen Moulton, the managing director, the board have received no remuneration.

The capital necessary for carrying out the Atlantic Telegraph enterprise in the best manner has now been provided. Tenders and specimens from eight contractors were received, and were all submitted to the scientific committee appointed by the directors, consisting of Capt. Galton, R.E., Prof. Wheatstone, Prof. Thompson, Mr. Wm. Fairbairn, and Mr. Joseph Whitworth. This committee has sent in its report, unanimously recommending the board to accept the tender of Messrs. Glass, Elliot, and Co. The directors have adopted the recommendation, and entered into a contract with the firm, whereby the latter are bound to manufacture a cable of the best description, to be approved by the scientific committee and the board. They also undertake to lay the cable across the Atlantic in the summer of 1864. The manufacture of the cable has already commenced.

LEEDS, SEPT. 17.—In mining shares dealings have not been very numerous, but quotations have a firmer tone. We are glad in being able to state that the improvement which has taken place in Bracon Consols Mine has materially enhanced the value of the shares.—JOHN GLEDHILL AND CO.

COAL MARKET.—On Monday, the arrival of 100 fresh ships gave a good supply of all sorts of coal, and business was brisk for all descriptions at fully last day's prices. Best house coal, 17*s.* to 18*s.* 6*d.*; seconds, 16*s.* 3*d.* to 17*s.* 3*d.*; Hartley's, 15*s.* to 16*s.*; manufacturers', 13*s.* to 15*s.* per ton.—On Wednesday, a further arrival of 78 ships; the tone of business was quiet, but Monday's prices in all cases quoted.—On Friday, there were 43 fresh ships. House coal met with little enquiry, and the amount of business done was trifling, prices quoting as on Wednesday for all kinds of coal. Haswell Wallend, 18*s.* 3*d.*; South Hetton Wallend, 18*s.* 6*d.*; Tees Wallend, 17*s.* 6*d.*; Eden Main, 16*s.* 9*d.*; Hough Hall Wallend, 17*s.*; West Hartley, 16*s.*; Hartley's Hartley, 16*s.*; Cowpen Hartley, 16*s.*; Lambert's West Hartley, 15*s.* 9*d.*; Bute's Tanfield Moor, 13*s.* 15 cargoes unsold; 55 ships at sea.

BREACHES OF COLLIERY REGULATIONS.—On Monday, Mr. John Pollitt, of Heywood, a manufacturer and colliery proprietor, appeared at the Bury Petty Sessions, to answer informations obtained against him by Mr. Joseph Dickinson, Inspector of Mines, charging him with breaches of the colliery regulations in several particulars.—Mr. Crossland, who appeared for the prosecution, said that the defendant was charged with having neglected to send notice of the death of a man named James Turner, who met with his death in a colliery belonging to the defendant on Aug. 24, through suffocation by black-damp. The mine in question was an old one, called the Pilsborough Colliery. The mine had been closed for several years, and had recently been re-opened by Mr. Pollitt, who, although a cotton spinner, had expressed himself as knowing there was an Act respecting collieries. His first duty upon this colliery being re-opened was to send notice of the fact to the Inspector, under the 21st section of the 25th Vic. c. 81. Of course the object of this precaution was that the Inspector might have the supervision of the mine. The death of Turner came under the notice of the Inspector, who on visiting the mine found that there were no special rules at all there for the government of the mine, and for the guidance of the managers of the colliery and others connected with it, as required by the 11th section of the Act of Parliament. The defendant was also liable to a further penalty for not producing sufficient ventilation, which if it had been done would have prevented the accident. A person was appointed as manager of the colliery at a salary of 1*l.* a week; but this person was perfectly incompetent for the post he held. There was a further information against the defendant for not providing a proper ladder for the use of the men. The Inspector said that he had not received notice of each of these cases, but an arrangement has been made, whereby the defendant pleaded guilty to the first information, a penalty of 20*l.* being imposed, and that with respect to the remainder of the information he would pay the costs.—Mr. Watson said it was due to Mr. Pollitt to say that up to his taking this colliery he was totally unacquainted with the regulations. He employed a person whom he thought to be competent as a manager, and from that man's neglect his own death had ensued. Mr. Pollitt deeply regretted the circumstance, and as had been already stated, he consented to pay the penalty of 20*l.* for the first offence alleged against him, and to pay the costs in the other cases.—The Magistrate consented to this arrangement.

SAFETY-LAMPS.—Mr. J. Dickinson, the Inspector of Mines for the North and East Lancashire district, in his report for the year 1862, just published, states that in coal mines, amongst the men, "there is a great dislike to work exclusively with safety-lamps. The lamps are not so handy, and do not give so good a light as a candle, which the workmen prefer to light on with their work." I beg to suggest to him, and to those interested, the adoption of one or other of two modifications of the safety lamp, which I devised some years since, and which I now place at their disposal. The first is an ordinary policeman's bull's eye lamp, having a closely fitting glass, which should be kept locked. At the top of the lamp there is a permanent grating of fine wire gauze, and another at the bottom. The second modification is an ordinary argand lamp, with a closely-fitting mica tube for a lamp glass, such as is now used in Germany. The lamp is netted top and bottom with fine gauze. These lamps are safe, simple, and cheap; they are easily manageable; the light is superior to that of a candle, and if paraffin oil is used it will be equal to gas; they are strong, and do not easily break, nor are they liable to get out of order.—R. C. SMITH, M.D.: Manchester.

BANKING IN RUSSIA.—We extract the following from the article on "Russia" of our contemporary, the *Standard*, of Monday:—

"The present condition of financial affairs here is causing a great deal of attention to be paid to a projected English joint-stock bank, to be established here and in other towns in the Russian empire. The Government has for some considerable time been engaged in endeavouring to bring up the value of the rouble to par (about 3*s.* 2*d.*) from its depreciated value. In 1862, this operation was commenced by the Paris loan, negotiated by the Russian Government with Rothschild, when the rouble was taken at 2*s.* 10*s.* or 2*s.* 11*d.* To bring about the intended result the State Bank has gradually contracted its discount operations, and many of the leading mercantile firms here have been positively refused any advance, whether against bills or Government stock. Those firms have more especially been so treated which have been largely engaged in exchange operations. Importers have been to some extent advantaged in this respect, but even they are much less supported by the bank than hitherto. The shopkeepers and retail dealers have been in proportion more favoured, but the amounts for which they have been allowed to discount have recently been largely reduced. The rate of discount charged by the bank is 6 per cent., but as its operations are now so greatly limited, this rate is practically nominal. This condition of monetary affairs has naturally created great consternation, the more so as the few large discounters who formerly carried on business have likewise withdrawn their money from the market, and the real rate of discount is from 8 to 10 per cent., whether on bills, Government securities, or stock or shares guaranteed by Government. The condition of trade is nevertheless sound; there is no overtrading; and with a judicious monetary system, trade and commerce would be largely and safely developed, and there never has been a better opportunity in any country for a joint-stock bank than that which is now existing here. Feeling, therefore, the universal want of mercantile facilities, it is not to be wondered at if persons of all ranks and positions are disposed to give every encouragement to a bank of this kind. A preliminary meeting of the proposed bank was held on April 17 last, to certain gentlemen of well-known standing in

London, who engaged within three months to procure the co-operation of financiers of European reputation who would join them in the concession; the names they gave were those of Messrs. Roberts, Ricardo, Kinnaird, and Chapman—names well known here, and of standing sufficiently sufficient to satisfy the Government. The papers connected with the concession have finally been approved by all the authorities here, and the formal signature of the Emperor is said to have been given on the 3d instant. The concession will enable the promoters to establish whatever branches they think fit throughout the empire; it will give them an exclusive term, within which no similar institution will be permitted, and will empower the company to transact all kinds of banking business."

The Royal Cornwall Polytechnic Society commenced its meetings on Tuesday, and is, doubtless, one of the most successful that has been held for some time. Mr. Moenselmer, of Dolgelly, has been awarded a first bronze medal for his model of Paul Rittinger's ore dressing tables, and several other models have attracted much attention. We shall give the details of the meeting in our next.

SALE OF THE ALFRED CONSOLS MATERIALS.—The most satisfactory sale of mine materials that has taken place in the county of Cornwall for years past was that held at Alfred Consols, on Tuesday, when Mr. John Burgess, of Barncombe, officiated as auctioneer, who, being thoroughly acquainted with the value of every article upon a mine, gained considerable advantages in favour of the sellers. In several instances, he stated he must have a starting price, but the purchasers would not hear it. Eventually Mr. Burgess was called back, and made a considerable amount over his starting point. As soon as the delivery is finished for this sale, another will follow, and it is to be hoped, with the same amount of success. It is said such a large number of purchasers were never present at a mine sale in Cornwall.

GREAT DEVON AND BEDFORD (COLCHARTON) COPPER MINING COMPANY.—The committee of the Stock Exchange appointed yesterday a special settling-day in the shares of this company, which, however, are not to be marked in the Official List.

THE TIN STANDARD.—The tin standard was again reduced on Tuesday 2*s.* per cwt., making the present quotation:—For common, 104-106*s.*; refined, 106-108*s.* In July last the standards for tin ores were:—For common, 111-112*s.*; refined, 114-117*s.*; showing a reduction of no less than 7*s.* to 9*s.* per cwt. on the price received by the miner. A highly esteemed correspondent sends us the following on the repeated drops in the tin standard:—"I have reason to fear that the very respectable firm who have for the last month resisted the efforts of other parties (who care nothing about tin mines and the large capital invested in them) to put down the standard, has at last unfortunately yielded, and that the standard is put down 4*s.* on all kinds of tin. This course of proceeding on the part of smelters will greatly depress tin mining, unless some course is adopted on the part of the mines to put a check to it."—*West Briton*.

LEAD ORES.				
Mines.	Tons.	Price per ton.	Purchasers.	
Miners Union .....	15	£13 13 0	Sims, Williams, & Co.	
Sold on the 8th September.				
Cargill .....	68	16 3 0	Panther Co.	
Sold on the 11th September.				
Harwood .....	10	12 12 6	Cookson & Co.	
Sold on the 14th September.				
Frongoch .....	80	12 13 6	Panther Co.	
Cefn Brynno .....	20	12 12 6	ditto	
ditto .....	20	12 12 6	Walker, Parker, & Co.	
East Darren .....	75	15 19 6	Mining Co. of Ireland.	
Cwm Erti .....	25	16 1 6	Panther Co.	
ditto .....	16	3 0 0	ditto	
Sold on the 15th September.				
West Chiverton .....	70	18 15 6	Stock & Co.	
ditto .....	60	12 3 6	Walker, Parker, & Co.	
Sold on the 16th September.				
Great Laxey .....	100	18 4 6	Mining Co. of Ireland.	

BLACK TIN.				
Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Kitty (St. Agnes) 20 2 20	20	2 20	1353 19 7	—
Sold on the 14th September.				
St. Wh. Vor 30 18 3 26	30	18 3 26	2185 9 10	—
Sold on the 15th September.				
North Jane 2 6 3 8	2	6 3 8	148 13 2	—

COPPER ORES.				
Mines.	Tons.	Price per ton.	Purchasers.	
Parya Mines .....	165	£5 3 0	Mona Co.	
ditto .....	165	5 3 0	ditto	
Sold on the 15th September.				

COPPER ORES.				
Sampled Sept. 2, and sold at the Royal Hotel, Truro, Sept. 17.				



## THE CLOWANCE WOOD MINING COMPANY (LIMITED).

Capital, £25,000, in £25,000 shares, of £1 each.  
Deposit, 2s. 6d. per share on application, and 2s. 6d. on allotment.  
If no allotment takes place the deposits will be returned in full.

**DIRECTORS.**  
SAMUEL BOYD BARNETT, Esq., Deane, Wigan, Fiddlington.  
Major FREDERICK DITMAS (late of Madras Engineers), Croydon.  
W. GAFFNEY, Esq., merchant, 79, Great Tower-street, London.  
Capt. LEWIS MUNRO, Blackheath and Hastings.  
LEWIS ROCHFORD, Esq., Crown-street, Finsbury, and Barnet, Herts.  
WILLIAM SOWERBY, Esq., C.E., F.G.S., late Superintendent Engineer of Department of Public Works, India.  
The National Bank, Old Broad-street, London.  
The Miners' Bank, Cambrone, Cornwall.  
**SOLICITORS**—Robert W. Stapool, Esq., Finner's Hall, Old Broad-street.  
ADDISON—W. J. Thompson, Esq.  
SECRETARY—George H. Cardozo, Esq.  
OFFICES—No. 15, NEW BROAD STREET, LONDON.

**PROSPECTUS.**  
Clowance Wood Mine is situated in the parish of Crowan, in the county of Cornwall, and is in land which, until a few years since, never could be obtained for mining purposes. It is bounded on the south by the celebrated Crenner and Wheal Abraham, north by Wheal Clowance and Rosewarne Consols, and west by Binner Downs and Wheal Treasury, and is surrounded by numerous dividend-paying mines. It will thus be seen that the position of the mine is most favourable for profitable mining enterprise, and, by referring to Hopkins' work on Geology, 224 plate, some idea may be formed of the splendid metalliferous district in which these mines are situated.

An adit level, which unwaters the mine to a depth of 22 fms., has been taken up from the valley, and several shafts have been sunk; and altogether about £5000 have been expended in developing the mine, which has proved its success to be a matter of certainty. Five lodes have been intersected, all of which have been extremely productive in the adjoining mines, and cannot fail to make large returns.

Several tons of rich copper ore have been returned; but, from the increase of water, and the absence of necessary machinery, the further working of the mine has been delayed; sufficient, however, has been discovered to prove that the lodes which have already been driven on increase greatly in richness and quality as they deepen, as is the case with the most productive mines adjoining. The mine is traversed by a large elvan course, and also by cross-courses, contiguous to which enormous deposits of copper ore were found; and in the celebrated Wheal Abraham, adjoining, one lode alone returned upwards of £1,250,000 sterling.

A 60-in. engine will be erected, costing with engine-house, fittings, coal, and labour for twelve months to come, about £5000, after which it is estimated that a large return and good dividends will be made.

Prospectuses with plans, reports, forms of application for the shares, &c., may be obtained at the office of the company.

The following well-known mining authorities have inspected and reported on the mine:—**Captain CHARLES THOMAS**, manager of Dolcoath, West Seton, Stray Park, and other mines; **Capt. JOSEPH VIVIAN**, manager of North Crook, North Croft, and other mines; **Capt. WILLIAM PASCOE**, manager of South France, Waddon United, and other mines; **Capt. JOHN NANCARROW**, manager of St. Ives Consols and other mines; **Capt. WILLIAM TREAG**, manager of Foden-and-United Mines; **Capt. EDWARD CHEGWIN**, manager of South Crook Mines; and **Capt. SAMUEL J. REED**, **THOS. HARRISON**, **JOHN HARRISON**, and **MARK REED**.

## THE EAST PANT DU UNITED LEAD MINING COMPANY (LIMITED).

Incorporated under the Companies Act, 1862.  
Capital, £30,000, in 6000 shares, of 5s. each. Deposit, 10s. per share on application, and 10s. upon allotment.

**DIRECTORS.**  
WILLIAM TITHERTON, Esq., cotton broker, Liverpool.  
Ralph TUNNICLIFFE, Esq., cotton spinner, Fir Mill, Leigh.  
ROBERT ASHWHITE, Esq., cotton spinner, Wardle, near Rochdale.  
HENRY WHITWORTH, Esq., Carlton-buildings, Cooper-street, Manchester.  
SAMUEL MERRYWEATHER, Esq., Caldbeck, Wigton, Cumberland.  
THOMAS BLACKBURN, Esq., cotton broker, Liverpool.  
**BROKERS**—Messrs. Mewburn and Barker, Moulton-street, Manchester, and Halifax.  
**BANKERS**—Union Bank of Manchester (Limited).  
**SOLICITORS**—Messrs. Walker and Smith, Chester.  
**SECRETARIES AND MANAGERS**—Messrs. Henry Whitworth and Co., registered offices.  
CARLTON BUILDINGS, COOPER STREET, MANCHESTER.

**ABRIDGED PROSPECTUS.**  
This company is formed for the purpose of purchasing and working the extensive and valuable mining sets known as the East Pant Du and the Colomindy Lead Mines, situated near Mold, Flintshire.

The East Pant Du sett, which adjoins the celebrated Pant Du, is about 280 acres in extent, and has three parallel veins, extending from east to west about a mile and a quarter in the sett. These are principally in the limestone formation.

A shaft has been sunk upon the principal vein, to a depth of about 100 yards, and several levels driven on the course of the vein, from which large quantities of ore have already been obtained.

This vein, in the Old Pant Du sett, returned £23,000 royalty within a very few years. The mine is drained by a swallow, or natural formation in the rock, to the depth of 150 yards, thus avoiding all expensive engines and machinery for pumping the water.

The Colomindy sett is situated at a short distance from the East Pant Du, and parallel with the celebrated Maesysafn Mines, now worked by Messrs. John Taylor and Sons, and an influential company. Several shafts are sunk and levels driven, and great quantities of ore have been raised. A steam-engine and the necessary buildings are upon the property, and the mine is in full operation. There is also another well-known rich lode, not in working, running through this sett.

Detailed prospectuses, containing full particulars and reports upon the property, may be obtained from the managers, at their offices, Carlton-buildings, Cooper-street, Manchester; and Abchurch Chambers, Abchurch-lane, London; and from the brokers, bankers, and solicitors of the company.

## CHIVERTON WHEAL ROSE SILVER-LEAD MINE.—ST. COLUMB, CORNWALL.

In 100 shares.  
This valuable property has been granted by H. H. H. the Prince of Wales, for a term of 21 years, at a royalty of 1-15th, to be reduced to 1-18th upon an engine being erected. It is situated in the parish of St. Columb, Cornwall, near to the original workings of East Wheal Rose, and the principal lodes are a continuation of those worked in that celebrated mine.

East Wheal Rose was divided into 128 shares, of £50 each, and the total amount paid in dividends was £287,360, or forty-four times the amount of the capital invested; this was paid during a period of twelve years, being an average of 367½ per cent. per annum. During this period shares were at a very high premium, and in September, 1845, they were saleable at £1800 each, or thirty-six times their original cost. The following were the current prices of £50 shares during part of the time the mine was at work:—

Date	Price	Date	Price
January 6th, 1844	£1000	January 30th, 1846	£1500
June 1st, 1844	1250	June 27th, 1846	1300
December 28th, 1844	1500	December 26th, 1846	1100
March 29th, 1845	1600	March 27, 1847	1200
June 7th, 1845	1500	June 26, 1847	1300
September 27th, 1845	1800	December 24th, 1847	1200

So that in September, 1845, the market value of the whole mine (which had then paid its proprietors £161,140 in dividends) was £230,400, making with the dividends paid a total of £281,540, or nearly 60 times the capital invested.

The dividends paid up to the end of 1845, amounted to £181,140

Year	Dividend
1846	30,720
1847	34,560
1848	25,500
1849	15,920
1850	16,000

At this period blende and muddle were of no marketable value, and the price of lead was but 25 per cent. less than it is now, so that at the present prices these large profits would have been very much larger.

Chiverton Wheal Rose has been inspected by several agents, who report most favourably as to the value of the property, and express their opinion that it will prove a very successful undertaking. A large sum has been expended in opening the mine. The adit level has been driven for a distance of 120 fms., and has intersected several lodes containing rich silver-lead ore. As soon as the lodes are cleared, tribute pitches can be set, and early returns of ore will be made. It is confidently anticipated that, with a judicious outlay of capital, a very profitable mine will be opened up.

The mine is at present divided into 100 shares, a limited number of which are for disposal. Applications for prospectuses and shares to be made to Messrs. T. FULLER and Co., 2, Winchester-buildings, Great Winchester-street, London, E.C.

## THE PATENT FILE COMPANY (LIMITED).

Incorporated under the Companies Act, 1862.  
Capital £100,000, in 10,000 shares of £10 each, of which not more than £20,000 will be required to set the works in full operation.  
Deposit on application, 10s. per share. Payment on allotment, 10s. per share.  
Calls of £1 per share, at intervals of not less than two months.

**CHAIRMAN**—Mr. BERNARD GILPIN (William Gilpin, Sen., and Co., Edge Tool Manufacturers), Wedges Mills, Cannock.

**OFFICES.**  
27, MOORGATE STREET, LONDON; 29, WATERLOO STREET, BIRMINGHAM.

**ABRIDGED PROSPECTUS.**

This company has been formed to manufacture files by machinery in lieu of hand labour, whereby the cost will be materially reduced and the quality improved: it is founded on the experience of similar undertakings in successful operation in France and Belgium.

Detailed prospectuses and forms of application for shares may be had at the offices of the company, 27, Moorgate-street, London, and 29, Waterloo-street, Birmingham; and also of the following brokers:—The Members of the Birmingham Stock Exchange. Mr. SAMUEL FERNSTON, Manchester; Mr. RICHARD WITHERS, Liverpool; Messrs. JOHN WATSON and Son, Sheffield; Mr. JONATHAN DREWRY, Newcastle-on-Tyne; Mr. W. H. GREEN, Gloucester; Mr. G. S. BRYANT, Bristol; Mr. GEORGE RIDGDALE, Albion-place, Leeds; Messrs. AITKEN and MACKENZIE, Glasgow.

## THE PATENT FILE COMPANY (LIMITED).

**NOTICE.**—The Directors will PROCEED to an ALLOTMENT on the 30th inst. Applications for the remaining shares to be made before that date.  
By order of the Board. HENRY HOWELL, Secy.  
29, Waterloo-street, Birmingham, September 10, 1863.

## TO INVESTORS.—CONSULT MR. GRIFFITH, 27, LEADENHALL STREET, LONDON, E.C., WHO ADVISES AS TO THE RESPONSIBILITY, VALUE, AND PROBABLE PROSPECT OF SUCCESS OF ANY SCHEME, PUBLIC COMPANY, &amp;c., WHETHER ALREADY ESTABLISHED OR IN COURSE OF FORMATION.

In Chancery, Lancashire.

## SCHIELE'S PATENTS—SCHUNCK v. SCHIELE.

Notice is hereby given, that by a deed dated July 14, 1863, executed pursuant to an order of this Court, and duly registered at the Patent Office, London, C. SCHIELE ABSOLUTELY ASSIGNED TO MARTIN SCHUNCK, Esq., the PATENTS, comprising the following inventions:—  
SCHIELE'S TURBINE WATER WHEELS.  
PLATT AND SCHIELE'S SILENT FANS, including AIR PUMPS or GAS EXHAUSTERS.  
SCHIELE'S BLAST ENGINES.  
SCHIELE'S GOVERNORS FOR STEAM ENGINES AND WATER WHEELS.  
SCHIELE'S VENTILATING ENGINES.  
SCHIELE'S CENTRIFUGAL PUMPS.  
SCHIELE'S TURBINE STEAM ENGINES.

SCHIELE'S FEED PUMPS.  
SCHIELE'S VARIABLE EXPANSION GEAR.  
SCHIELE'S LUBRICATION.  
SCHIELE'S HYDRAULIC TRANSMISSION OF POWER.  
SCHIELE'S HYDRO EXTRACTORS.  
SCHIELE'S CONTACT GEAR.  
SCHIELE'S CONTINUOUS WHEEL CUTTING MACHINERY.  
SCHIELE'S NUT TAPPING MACHINES.  
SCHIELE'S OSCILLATION BREAK FOR GOVERNORS FOR RAILWAY TRAINS, &c.  
SCHIELE'S CONTINUOUS SCREW CUTTING MACHINES.  
SCHIELE'S APPLICATION OF THE ANTI-FRICTION CURVE TO FOOTSTEPS OF SHAFTS, TO COCKS, VALVES, &c.  
SCHIELE'S HYDRAULIC WEIGHING MACHINES.

Mr. SCHIELE is not authorised, either by himself, or his partners or agents, to receive any orders, or transact any business, relating to the above.  
All applications for terms of license, &c., of inventions not already exclusively licensed, to be made to WILLIAM RADFORD, Esq., civil engineer, John Dalton-street, Manchester; or to the NORTH MOOR FOUNDRY COMPANY, Oldham, who are authorised to treat, on behalf of Mr. SCHUNCK, for the same.

LEWIS, DARBISHIRE, AND ASHWORTH, 21, Brown-street, Manchester, Solicitors for Martin Schunck, Esq.  
August 24, 1863.

## THE NORTH MOOR FOUNDRY COMPANY, OLDHAM.

SOLE LICENSEES AND MANUFACTURERS OF SCHIELE'S TURBINE WATER WHEELS.  
PLATT AND SCHIELE'S SILENT FANS.  
SCHIELE'S BLAST ENGINES.  
SCHIELE'S VENTILATORS FOR SHIPS.  
PLATT AND SCHIELE'S MINE VENTILATORS.  
SCHIELE'S AIR PUMPS or GAS EXHAUSTERS.  
SCHIELE'S GOVERNORS FOR TURBINES.

**SPECIAL NOTICE.**  
The NORTH MOOR FOUNDRY COMPANY, having found that some of their customers have had an impression that their machines could be obtained from other parties than themselves, beg to inform the public that they POSSESS the SOLE and EXCLUSIVE RIGHT to the ABOVE PATENTED INVENTIONS, and that they have not authorised any other parties to manufacture and sell the same.—For illustrated circulars, apply to the NORTH MOOR FOUNDRY COMPANY, Oldham.

Mr. SCHIELE has NO INTEREST whatever in the ABOVE INVENTIONS, and is NOT AUTHORISED to RECEIVE ORDERS or TRANSACT ANY BUSINESS in the same.

## MESSRS. C. SCHIELE AND CO., ENGINEERS, PATENTEES, AND SOLE MANUFACTURERS OF SCHIELE'S TURBINE WATER WHEELS OF 1863.

SCHIELE'S PATENT SILENT FANS OF 1863.  
SCHIELE'S PATENT CENTRIFUGAL PUMPS OF 1863.  
SCHIELE'S PATENT BLAST AND VENTILATING ENGINES OF 1863.  
SCHIELE'S PATENT TURBINE STEAM ENGINES OF 1863.  
SCHIELE'S PATENT MARINE VENTILATORS OF 1863.  
SCHIELE'S PATENT MINE VENTILATORS OF 1863.  
SCHIELE'S PATENT EXHAUSTERS OF 1863.  
SCHIELE'S PATENT COMPOUND FANS OF 1863.  
SCHIELE'S PATENT BLAST ENGINES OF 1863.  
SCHIELE'S PATENT GOVERNOR OF 1863.  
SCHIELE'S PATENT WATER POWER MACHINERY OF 1860.

It having come to the knowledge of Messrs. C. SCHIELE and Co. that other parties are representing themselves as licensees and manufacturers of the above patented inventions, Messrs. C. SCHIELE and Co. beg to say that such representations are untrue; and further, that Mr. SCHIELE is the SOLE INVENTOR, and that his firm are the SOLE PATENTEES and the SOLE MANUFACTURERS of the ABOVE PATENTED INVENTIONS, and that any firm or company representing that they have a license for, or that they can manufacture or supply the same, are stating what is utterly and completely false.

Messrs. C. SCHIELE and Co. beg to intimate that the PATENTS SOLD to Mr. SCHUNCK by Mr. SCHIELE ONLY COMPRISE Mr. SCHIELE'S OLD PATENTS, taken out prior to 1860, and DO NOT INCLUDE ANY of the PATENTS ENUMERATED ABOVE, or Mr. SCHIELE'S PATENT CRUSHING MILLS and HAMMERS of 1860, or Messrs. ORMEROD and SCHIELE'S STONE DRESSING MACHINES of 1862.

Messrs. C. SCHIELE and Co. further state that they have NO CONNECTION with ANY OTHER FIRM or COMPANY; and further, that Mr. SCHIELE never was a member of the North Moor Foundry Company, such company being composed of persons who were formerly in the employ of Mr. SCHIELE, and to whom Mr. SCHIELE granted licenses on royalty for his old Patent Fan of 1861, and Turbines of 1862 and 1865, and which licenses Mr. SCHIELE withdrew in January of this year.

Spinners, manufacturers, calico printers, bleachers, dyers, engineers, ironfounders, colliery proprietors, &c., desirous of having any of Mr. SCHIELE'S newest inventions, which are guaranteed to be much superior to and no infringement of Mr. SCHIELE'S old patents, or any other English or foreign invention, and to which they have no resemblance whatever, are respectfully requested to apply to Messrs. C. SCHIELE and Co., Clarence-buildings, Booth-street, Manchester.

**N.B.—LEGAL PROCEEDINGS WILL BE INSTITUTED AGAINST ANY PERSON OR PERSONS INFRINGING ANY OF THE ABOVE PATENTS.**

## THE PROGRESS OF MINING IN 1862, BEING THE NINETEENTH ANNUAL REVIEW.

By J. Y. WATSON, F.G.S., Author of the Compendium of British Mining (published in 1843) *Gleanings among Mines and Miners*, &c.  
The EIGHTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in the MINING JOURNAL of December 28, 1861, and January 4, 1862.

A FEW COPIES OF THE REVIEW OF 1855, containing Statistics of the Metal Trade the Dividends and Percentage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also a FEW COPIES OF THE REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining offices, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

## WATSON AND CUELL'S MINING CIRCULAR, published every Thursday morning, price 6d. or £1 ls. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to Investors and Speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &amp;c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CUELL, 1, St. Michael's-alley, Cornhill.

N.B. Messrs. WATSON and CUELL have made a selection of a few dividend and progressive mines, which they have reason to believe will pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

Now ready, second edition, with latest Official Statistics, price 1s., or free by post for thirteen stamps.

## BRITAIN'S METAL MINES: A complete Guide to their Laws, Usages, Localities, and Statistics.

By JOHN ROBERT PIKE, 3, Finner's-court, Old Broad-street, London, E.C.  
CONTAINS:—  
Mining for Metallic Minerals considered as a National Industry and as a field for Investment.  
Geological and Mineralogical Characteristics.  
The Mines of Cornwall and Devon.  
The Mines of England and Wales (Cornwall and Devon excepted), Scotland, Ireland and the Isle of Man.  
System of Roasting, Dressing, and Selling Ores.  
The Stannaries Court, and the Cost-Book System of Management.  
The Share Market.

**OPINIONS OF THE PRESS.**  
"One of the most valuable works for the investor in British Mines which has come under our notice, and contains more information than any other on the subject of which it treats."—*Mining Journal*.

"We believe a more useful publication, or one more to be depended upon, cannot be found; and with such a work in print it would be gross neglect in an investor not to consult it before embarking his money."—*The News and Bankers' Journal*.

**IMPORTANT TO INVESTORS IN MINES.**  
Now ready, second edition, price 1s. 6d., by post 1s. 8d.

## THE HISTORY AND PROGRESS OF MINING IN THE CARADON AND LISKEARD DISTRICTS.

By WEBB AND GEACH, of the London Stock Exchange.  
A good guide for investors, if they wish to invest in the mines of the district to which the book refers. By a careful perusal of its pages they cannot err. It is a carefully written and well-authenticated book.—*City Press*.

London: Published by Edinham Wilson, Royal Exchange, E.C.

## MINING, LAND, AND RAILWAY SURVEYING, &amp;c.

Containing the Errors of the Magnetic Needle, Practical Geometry and Trigonometry, with Description and Use of the Miners' New Transit Theodolite. Also, a new plan of Setting Out Railway Curves, Levelling, &c., underground. With 100 pages of tables, the whole illustrated by numerous plates and woodcuts.

By H. D. HOSKOLD, Mining Engineer and Surveyor.  
Publishers: Atchley and Son, 106, Great Russell-street, London.  
Sent carriage free.

## NEW WORK ON THE VENTILATION OF MINES

By RALPH MOORE, Mining Engineer.  
Glasgow: M. Ogle and Son, Exchange-square.—London: Hamilton, Adams, and Co., Paternoster-row.

## Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

**STRANGE PRODUCTION FROM A BLAST FURNACE.**—A specimen of spun glass was some years ago given to me as taken from a furnace in Staffordshire. I suspect the strange production alluded to, though looking like flakes of cotton, may be fine spun glass. Such substances, I apprehend, are produced by the hot gases in the interior of the furnace blowing the vitreous and vitrified slag through orifices, whilst in a highly molten state.—P. HUTCHINSON.

**WICKLOW COPPER COMPANY.**—The Hibernian Mine Company has, by amalgamation with the Wicklow Copper Company, ceased to exist since Sept. 1. In last week's Journal, I observe a great mistake committed by your correspondent here. Each share in the old Wicklow Copper Company is now represented by three shares in the new company, and consequently the great increase in the value of the shares, as stated by him, is quite visionary. The old shares were about 28s. to 40s. previous to the amalgamation; the new shares are at 13s., which is equal to 39s. ex div., while your correspondent makes them equal to 82s. The shares in the new company are 17,000 in number, of 2s. 10s. each, of which 15,000 were allotted for the 5000 shares in the old Wicklow Company, and 2000 for the shares in the Hibernian Company.—J. F. WRIGHT: Dublin, Sept. 14.

**GREAT NORTHERN MINING COMPANY OF AUSTRALIA.**—Private and reliable advices have come to hand respecting this company. In the great cross-cut, which has been in progress so long, a valuable lode has been intersected, and several tons of ore raised of a very high percentage. This cross-cut into the hill gives an immense lode to surface in virgin ground, and needs no expense of pumping to drain the ore ground, which will save the proprietary many thousands of pounds. It is very pleasing to have to record success of such an important nature to a company who have so patiently waited, and so liberally advanced funds towards the promotion of one of the greatest mining undertakings of the present day.—G.

**OLD WHEAL NATURE.**—Mr. Josiah Harris has not answered the questions put by "A Shareholder" a fortnight since so satisfactorily as desired. I received a circular from Mr. Alison, one of the late directors, a few weeks since, in which he states that there was only 25s. then in the bankers' hands. If that statement be correct, then the non-payment of last month's wages may be accounted for. However, whether the rumours respecting the mine and management be true or not, it is high time to convene a general meeting of the shareholders, and by some energetic measures place the mine in a proper financial position; and if there be any merchants' claims unsatisfied, to liquidate the same. I will not dispute with Mr. Harris as to the number of directors now connected with the company, but I know that one official resigned, and two have declined to act any longer, so that out of the six members of the board there may be two, with Mr. Harris, to manage the property, which under present circumstances requires more than common care and attention.—A SHAREHOLDER.

**MINING COMPANY OF ITALY.**—Would you be so good as to correct the error made in last week's Journal, in reference to the Biellable Mines. My report stated a balance of 6l. 10s. per fm. of ground, not 16l. 10s. per ton, as stated in your City Article.—Geo. DARRINGTON.

**EXTRACTION OF POOR COPPER ORE—"J. O'F." (Quebec).**—A description of the process employed by Mr. Henderson was published in the *Mining Journal* of September and October, 1860. The process has never been successfully applied, except in the extraction of copper from sandstone ores; it consists essentially of converting the copper contained in the ore into a chloride, and then precipitating it. The treatment of the Alderley Edge deposit has been abandoned for some time, it being necessary, as we stated with regard to the extraction of iron from poor copper ores, to show that the value of the metal produced exceeds the cost of extraction. All processes for the treatment of poor copper ores depend upon the conversion of the insoluble compound of copper usually found in the ore into a soluble compound, which may be washed out with water. The copper contained in the solution is then precipitated by iron or otherwise. Full particulars of the most approved methods of treatment will be found in Phillips and Darlington's "Records of Mining" (London: Spon), and in Dr. Lam-born's "Metallurgy" (London: Virtue). Many patents have been taken, the whole of which would not cost above 10s.; the dates, &c., could be found by searching the specifications printed by the Commissioners of Patents, a set of which can be seen at the Library of Parliament, Quebec.

**WHEAL CARADON.**—Being a shareholder in this mine, and living at a distance, without the opportunity or sufficient leisure to visit it, I venture to seek, through the Journal, as also from my co-shareholders or correspondents, some information corroborative of the reports of the agents. I am induced to seek this not only for our satisfaction, but also in consequence of the irregularity with which the reports are published.—A SHAREHOLDER.

**NORTH MINERS LEAD MINING COMPANY.**—The following is the resolution which was passed and confirmed by the shareholders of the above company, authorising the directors to issue 5000 preference shares, and the terms upon which they were to be issued:—"That the directors be authorised to issue 5000 new shares at 1s. each, entitled to a preferential dividend of 20 per cent. per annum, and also entitled to share equally with the ordinary shares in the remaining profits, such preferential shares to be offered at par pro rata to the present shareholders, and those not applied for and paid up by a day to be appointed by the directors to be placed in the hands of the directors, to be disposed of for the benefit of the company."—June 19, 1863.—C. W. W. THOMAS, Secy.: 2, Crown-court, Threadneedle-street, Sept. 18.

**NORTH MINERS LEAD MINING COMPANY.**—Your correspondent, "C.," is informed, respecting this mine, that the preference shareholders are entitled to a preference dividend of 20 per cent., and if the profits are more than sufficient to pay this, then they are to share equally with the other shareholders in the remainder. In figures, the matter will stand thus:—

If profits are 1000l. yearly, preference shares get 20 per cent.

Share	Profit	Dividend	Old shares
2000l.	"	25	5
3000l.	"	30	10
4000l.	"	35	15
5000l.	"	40	20

So that if the profits are 5000l., the old shares at 10s. would be equal to the preference shares at 20s., and yet the former are selling at 4s., and the latter at a premium.

"C." need not be alarmed at the pleasant dream lately indulged in by Mr. Lane in "Truth's Echoes"—that the old shares would be swamped by the preference shares. The above figures prove that this cannot be the case. It can only prove true on the supposition that North Miners will never return more than 1000l. per annum profit. It will be a poor miserable result, after such confident predictions of the manager, who is best acquainted with the merits of the mine, and such an expenditure of time and money, if it does not return 5000l. profits yearly, when its neighbour, the Great Miners Mine, returned in profits last year 60,000l. If the directors expect only 1000l. profit yearly, they ought never to have called up the preference capital.—A LARGE HOLDER OF OLD SHARES.

## THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, SEPTEMBER 19, 1863.

British Mining, says a German contemporary, is a great fact, and the compliment is very sagely paid us that we are the only nation of the world by which Mining has been made a really national industry. Other countries, we are told, are equally rich in mineral deposits, nay, far more "geologically distinguished," but the true spirit is not in them to develop the hidden wealth, and to English enterprise, quite as much as to her mineral resources, is the world indebted for an eminently illustrious example of successful industry. We are not prepared to go so far with our Teutonic enologist, however learnedly he argues the point. British spirit in this sphere of productive labour flags at times very unaccountably, and requires a fillip every now and then to quicken its impulses in the right direction. It is a strange anomaly that with the advantages afforded in our mineral districts speculation should ever lull, should ever repose dormant and sluggish over those national El Dorados; but so it does; and when the cause of this inertness is enquired into, it is impossible to discover a graver reason than that So-and-so lost a thousand pounds in a mine in Cornwall, and he is a living warning to the world not to go into mining. Well, the fact is a deplorable certainty we admit, but it is by no means an evidence that So-and-so was wise in his generation, if he were he would have taken better care of his money; that is, he would have invested it, not like the purchase of a lottery ticket, upon the mere estimate of chances, but upon that available counsel which at the present time is based upon the science of mining, is within the reach of every man, and without which it may be possible, but it certainly is not probable, that success in mining adventure can be achieved.

We say now what we have often said before, that if loss is the destiny of many who dabble in mining matters they have in nine cases out of ten only themselves to blame for it; and we go further, and assert that if the veriest ordinary prudence is observed in the transactions entered upon there can be secured such advice as will, except in rare instances, ensure mining investors against the "ruinous losses" attributed to adventure. The attention of capitalists has no myth to divert it from surer sources of profit in mining; there is no such uncertainty in it as is so frequently represented—the allegations which a certain class indulge in to its detriment are unjust and puerile; in fine, as a rule, it may be taken for granted that he who in these days fails to any material extent in this enterprise would not be very likely to succeed in any other. However, it unfortunately happens that prejudices goes far and wide in hostility to mining; like that deteriorative telescope that was given, an evil boon, to the Eastern Sheik, and which could only present to him the asperities and aridness of every prospect he looked upon; the medium of judgment to which the decryers of mining trust is "one visioned," a delusive incapacity, and although not exactly a falsifier of facts, is, to all good intents and purposes, incapable of discovering the really good and sterling existences in the mining prospective. It would be ill reasoning in favour of a great national good did any one hesitate to admit that risk is as assignable to mining as to other commercial speculations. Failures will occur in this as in enterprises of any other



nature, but we do contend that MINING in this country, if entered upon under the aegis of common sense, exhibits but a very ordinary obstacle to the favourable progression of a man's fortunes.

In an interesting brochure before us, from the pen of Mr. T. E. W. THOMAS, is a pithy paragraph bearing on this subject, to which we readily accord space. Mr. THOMAS, in his preface, remarks that but a short time has passed since the greater portion of the capital invested in mining operations was that of the residents in the mining localities themselves; and he with very effective discrimination points out the advantages which shareholders now possess in having the management and control of adventures fixed in London, thus rendering every facility for enquiry and supervision, and he thus winds up his enumeration of those beneficial availabilities:—"With these facts plainly visible, it is not to be wondered at that this particular and important branch of industry should receive increasing patronage and support; and that from the application of the law of Limited Liability to new companies, increased confidence should be established, and mining investments made one of the leading channels of the day for the employment of capital."

Here is most certainly a fact well worthy the consideration of the monied and enterprising classes, and there is no denying that such the fact is: were a volume to be written on the subject the truth could not be more impressively enunciated, and we value at a very high and just rate indeed the intelligence being daily displayed by the mining community in publications of which Mr. THOMAS's pamphlet is a most interesting and estimable type, an opinion by no means singular.

To all who attach importance to such mining evidence, the following extract will be acceptable, as the embodiment of a truth, to which a too earnest consideration cannot be given. There is nothing of the namby-pamby in its expression: it is a plain matter-of-fact statement, and has all the honesty of conviction about it:—

The commercial greatness of this country arises from the vast mineral resources it contains. It is reasonable, therefore, to conclude that much profit must be attached to the employment of capital in the production of these riches. In mining for lead, tin, and copper, the result is often hazardous and uncertain, but when it is successful it enriches all who are connected with it. Instances of sudden wealth are almost daily occurring, whereby perseverance and outlay are rewarded a hundredfold, and those are benefited who have employed their means in the right direction.

The right direction certainly, and that is only to be discovered by those who apply for information to men of standing in the social sphere, who are not mere empirics and adventurers; and we are happy to say the MINING agents and shareholders of London are now, as a body, a class to whom valuable reference can be made, and in whom every confidence may be placed by those who desire mining investment. There is no branch of enterprise that requires greater caution than mining, but we are bound to say—we do so advisedly—that none other repays prudence more richly and enduringly. To this subject we shall suggestively address ourselves, for the benefit of those who are directing their attention to mining investment. The various mineral districts of the United Kingdom shall be brought under the notice of our readers; and while carefully holding aloof from recommending any particular adventures therein, the true facts and features of mining shall be truthfully delineated for the general good.

#### THE PIG-IRON TRADE.

From carefully prepared and elaborate statistics, compiled from "Mining Statistics for 1862," just published by Mr. Robert Hunt, F.R.S., it would appear that the production of pig-iron during the year 1862 has exceeded that of any previous year, notwithstanding the fact that during the greater portion of that year the iron trade suffered great depression; and that, moreover, the facilities for increased production are rapidly developing themselves. This can be proved by taking, as one instance, the very large make now going on in the Tees and Tyne district alone, where 17,000 tons are produced weekly, with the prospect of that quantity speedily reaching 20,000 tons. This district, almost totally unknown ten years ago, has doubled its make since 1855.

This extraordinary development can be accounted for, in some measure, by the progress detailed in the *Times*, of the 5th instant, during the visit of the British Association to Newcastle, where, it appears, that one firm alone (Messrs. J. and J.W. Pease) can produce 2000 tons of iron ore daily, with only 400 men; the cost of production there, consequently, cannot be enhanced to any appreciable degree, even with the present agitation of the labour question, bearing in mind that one man can raise 5 tons of ore daily, and that the class of labour employed is of the lowest description.

The agitation in the labour market in South Staffordshire, resulting in the concession of increased wages to the puddlers, has extended to other districts, and the opinion appears to be entertained that higher prices will rule; this idea has induced dealers and consumers of manufactured iron to lay in stock, and to make purchases for forward delivery, in anticipation of a further advance: it remains to be seen how far these anticipations will be realised. Thus, the advance in wages has been made on the more advanced stage of manufacture, which cannot but have the effect of reducing the demand for pig-iron, the raw material.

As regards the Scotch branch of the Pig-iron Trade, it appears that there has been an average increase of stocks during the last five years to the extent of 100,000 tons per annum, the average price during that period having been 54s. 5d. per ton. The stocks at the end of 1862 were 690,000 tons, and the price to-day is 57s. 3d. per ton cash, and 58s. per ton three months open.

**INJURIOUS ACTION OF LEAD PIPES ON WATER.**—The importance of discovering a really efficient means of preventing the injurious action of lead pipes on water is universally acknowledged, and the experiments of Dr. Grace-Calvert have proved beyond question that no proposition hitherto brought forward has been calculated to remedy the evil complained of. A discovery, however, has now been made, through which the water supplied by leaden pipes may be obtained by the consumer as pure as from the original source. Dr. H. Schwartz, of Breslau, has discovered a means by which the portion of the lead forming the interior surface of the pipe may be converted into an insoluble sulphide; the natural consequence being that the water passing through will be as free from contamination as if glass were used. The means by which Dr. Schwartz effects this conversion are extremely simple. He merely passes a strong solution of the sulphide of an alkali through the pipe to be acted upon, and the process is completed. This solution, which is either a sulphide of potassium or of sodium, is used at a temperature of about 212° Fahr., and is allowed to act upon the metal for from 10 to 15 minutes. It is stated that, in practice, a boiling solution of caustic soda and sulphur is found to answer every purpose.

**TO IRON MANUFACTURERS.—EXTRACTION OF IRON AND STEEL FROM THE CINDERS OF PUDDLING AND RE-HEATING FURNACES.**—The thought to give a more practical use to the many thousands of tons of cinder that are drawn from the puddling and re-heating furnaces, and which are by most of the rolling-mills thrown away as useless, or, in the best case, used as admixture to iron ore in blast-furnaces, in order to increase the yield (but certainly not to improve the quality) of the iron, has occupied my attention for several years past. I have made numerous experiments on a practical working scale, and I come now to detail the same in my present communication. Chemical analysis gave me the full assurance that these cinders contain invariably from 25 to 30 per cent. of metallic iron, combined and mixed with sulphur, silica, lime, and alumina, forming a brittle compound of a very peculiar constitution, defying the most ingenious devices of our ironmasters. Near Troy, New York, for instance, near the Troy and Albany Ironworks, are many thousands of these puddling cinders spread over the streets, every hundred pounds of which contain from 30 to 55 lbs. of good iron. After many unsuccessful attempts I have finally succeeded in extracting good cast as well as wrought-iron, and have even been so fortunate as to produce from this refuse material a good quality of cast-steel. Two great difficulties had to be overcome:—1st. The oxides and metallic iron are in these cinders combined with silica and other substances in such a peculiar way that, by re-melting the same in the puddling, cupola, or other furnace, very little of the metallic iron can be extracted; the combination withstands even the high heat in a steel crucible; no sufficient percentage of iron can be extracted to make it pay.—2nd. I have found, further, that by re-working the cinder with lime alone, or with lime mixed with charcoal and clay, the product was invariably red-short, and many times red and cold short (brittle at a bright red heat, as well as when hammered cold). The sulphur remained still combined with the iron; equally so the silicon and phosphorus—the three devils, or evil spirits, of iron. All my attempts to extract good neutral iron from the puddling by dry distillation of lime were unsuccessful; there was no other way open but to destroy or loosen the tenacious chemical combination of these substances before they were placed in the furnace. Unaltered burnt lime has the peculiar property to decompose silicates during the act of hydration, or slaking, as it is commonly called. This can easily be demonstrated by pouring water slowly into an intimate mixture of sand and fresh-burnt lime; the outside of the sand grains will yield to the lime gelatinous silica, and when dried, form with it a strong chemical combination—silicate of lime, the base of a good mortar. Taking advantage of this chemical fact, I mixed a proper percentage of powdered burnt lime with the fine ground cinder, and, after wetting the whole with water, exposed the mixture to the drying influence of the atmosphere. The dry compound was then heated in a common puddling furnace and treated like pig-iron. I obtained 50 per cent. of wrought-iron, which, however, retained still some traces of sulphur, leaving the iron somewhat red-short. To extract these last traces of sulphur I dissolved in the water I used for slaking the lime a small percentage of a chlorine salt, and my expectations were thoroughly realised. The process is also applicable to

the working of silicious ores, and can be performed in the puddling, cupola, or blast furnace; it can also be worked to advantage in Bessemer's, Neystrom's, Swett's, and other similar furnaces. The preparation of the cinder, cost of lime, salt, &c., do not exceed \$2 per ton, and the result is, if properly worked, invariably a good quality of iron.—A. L. FLEURY, Chemist, Philadelphia, Aug. 20.

**NON-EXPLOSIVE BLASTING-POWDER.**—An improvement in the manufacture of blasting-powder, patented by Messrs. Kellow and Short, of DeLaloe, was described in the *Mining Journal* of Feb. 21, and within the last week some experiments with the powder have been made at the Cragside Quarries, in Scotland, the result of which was highly satisfactory. The powder, it will be remembered, is manufactured by adding to a boiling solution of the nitrate of soda, or of potash, peat, tan, or sawdust, and then mixing chloride of potash with it; the addition of flowers of sulphur in powder completing the process. The powder bears no resemblance to gunpowder, is of a light brown hue, burns gradually away in open air; and while equal to the other as a blasting-powder, can, if the most ordinary precautions are taken, be used with the utmost impunity. A bore of about 4½ in. in depth was made in the quarry face, and charged with the new powder, which, on being ignited, threw up the ground around the bore and loosened the adjacent stones with a force that showed its strong explosive power, while at the same time another good feature of the invention was apparent in the limited volume of smoke that came from the blast. The advantage of this latter quality will be obvious to all who know, in mining particularly, the great volumes of smoke sent forth by the ordinary powder are apt to retard the resumption of the work near the place where the blast was made. Other experiments were then tried at the quarries, with equal success, every hole being fired with a uniformly fortunate result. The facility with which the powder is exploded in tamping will form an interesting subject for enquiry, and also whether it is more speedily affected by the absorption of humidity from the atmosphere. Upon Messrs. Kellow and Short giving satisfactory information upon these points the adoption of their powder cannot fail to become very general.

**HOW TO PENETRATE ARMOUR-PLATES WITH AN ORDINARY 68-POUNDER.**—Mr. P. M. Parsons has just issued a valuable little pamphlet, entitled "Guns versus Armour-Plates: A Practical Treatise on Great Guns, showing the Defects of some of the Recent Systems," &c. Among the several important suggestions contained therein is one which appears particularly worthy of consideration and adoption, inasmuch as it provides for the utilisation of all the existing ordinary service 68-pounders, which are now comparatively valueless. Mr. Parsons gives ample evidence of his knowledge of what is requisite to constitute a good gun, and then claims that his principle admits of application to old and even worn out cast-iron guns of large calibre. A conical recess is bored out of the breech end of the gun, and a tube of wrought-iron is turned and fitted into the recess, and secured in its place by a breech-screw. In guns of this size he recommends the lining tube to be made up of an inner tube surrounded by hoops or tubes shrunk, forced, or screwed on, and then turned to the proper size. The lining tube has a breech-plug of its own for preventing the explosive gases getting between the end of the lining tube and the breech-screw, and by acting on its larger area endangering its security. It is not necessary for the lining tube to be forced into the recess made in the reinforcement of the gun in order to produce an initial strain on it and the cast-iron; all that is necessary is to make it a fair and easy fit; but its length is so adjusted that by screwing up the breech-screw it may be compressed longitudinally between it and the shoulder of the recess by which the entire longitudinal length of the cast-iron is imparted to it. The treatise throughout is well worthy of consideration, that the economy or otherwise of the suggestions may be thoroughly ascertained.

**THE STEAMER "BARON OSE."**—The work of raising this vessel was commenced on Saturday, the 12th inst. Chains having been passed under her bottom, and lighters pinned down to them at low water, warps were laid out to haul her in towards the shore as she lifted. One of Norton's patent V pumps was placed over the fore, and one of Fowler's centrifugal pumps over the after hatch, but the leak being in the fore part of the vessel, and she being built in compartments, which were comparatively water tight, the brunt of the work fell on Norton's pump. On this being set to work, it was found to reduce the depth of water at the rate of 2 inches per minute over an area of 57 feet by 22 feet, and in about thirty-five minutes from starting the vessel rose on the early flood, and was safely got over to the south side of the river. The dimensions, &c., of the pump used are as under:—A pair of 8-in. V's by 13-in. stroke; diameter of suction-pipe 10 in., worked by 6-horse power engine, 70 revolutions per minute; 35 lbs. pressure of steam; consumption of fuel 84 lbs. per hour. Computing the quantity of water raised at the rate of 2 in. per minute would give 65,000 gallons, or 260 tons per hour, to which must be added the quantity of water continually rushing through the leak, which was found to be a long ragged rent, from 9 ft. to 10 ft. in length, and 3 in. broad in widest part.

**ELECTRIC GAS.**—Some months since we announced that Mr. John Grossmith, of Newgate-street, had invented an improved mode of procuring electric gas, which he designated Aura-electric Gas. In the production of this gas he claims the application of a new radiator by acting upon a solid, and of the use of a radiating multiplied network forming shelves, by which he presents more surface for the air to act upon the volatile liquid. He uses multiplied wire network for every one of the shelves, by which he presents both top and bottom surfaces for radiation. He also claims the use of a deflagrant (sic) volatile liquid, by which he again presents surface at all angles of his cylinder. In using asbestos he has an insoluble material upon which the volatile liquid does not act, hence either is more readily aerated, and the air becomes more readily carburated, by which he produces a carburated hydrogen gas most brilliant and lasting. He uses no heat nor fire whatever, but he furnishes an improved apparatus by the cold process of generating gas, by using horizontal trays of multiplied wire netting, on which a layer of asbestos presents multiplied surfaces through and above, and all over and around each tray the volatile liquid is made to pass. He uses no tubes nor cotton, nor any capillary action, nor any vertical arrangement of tubes, but relies upon atmospheric and galvanic electric action, and uses the positive force of the oxygen by atmospheric pressure, changes the polarity of nitrogen from the negative to the positive, sending into his cylinder positive together with the oxygen leaving the negative law to work in combination outside in harmony with the hydrogen uninterfered with by version of polarity, and the physical laws of atmospheric pressure without. He claims the use of zinc and copper, platinum, gold and silver wires, by which he promotes electric activity. He claims the use of a most delicately constructed valve, which controls the pressure of the gas, and prevents any reversion of polarity or flame back into the cylinder, so that explosion is impossible. He uses the chemistry of light in the arrangement of his luminosity where the celestial white light is required. He uses oxygen 16, nitrogen 14, and hydrogen 1 when a redder light is required. He uses oxygen in addition to the foregoing proportions where a whiter light is required. He claims the use of more nitrogen, and when intensity of heat a greener and bluer light are required, he claims the use of more hydrogen. Regarding carbon as the result of the combination of the three foregoing gases. He reserves the exclusive use of his apparatus for every purpose to which it may be found applicable in the carbonisation of common coal gas, to which it imparts a double luminosity; as also in the generation of the aura-electric gas.

**ATMOSPHERIC ENGINE.**—According to the invention of Mr. N. P. Lloyd, of Liverpool-street, for an improved atmospheric engine applicable to purposes to which steam, horse, wind, and water-power is applied, a metallic tube, or cylinder, is to be inserted at a right angle into a square or otherwise formed metallic plate. A metallic rod or bar is to be inserted at a right angle into a corresponding plate. These plates are to be united by means of a hinge, which will permit them closely to approximate, or to separate at a necessary distance. The sides attached to these plates will, when the plates are separated, be air-tight by means of appliances or substances connected with the sides and similar substances above and below them. This apparatus he terms No. 1, and another apparatus, which he designates No. 2, is also used. The tube of No. 1, and the rod or bar of No. 2, will pass through apertures provided with air-tight substances in one side of a cubic or elongated metallic air-tight box or chamber, from which the air will, through a stop-cock by means of an air-pump, be extracted. The rod of No. 1, and the tube of No. 2, will pass through apertures provided with air-tight substances in corresponding parts of the opposite side of the chamber. A stop-cock connected with the tube of No. 1 being opened will admit air between the metallic plates. A stop-cock connected with the tube of No. 2 being opened will admit air between the metallic plates. The air will force No. 2 (being connected with No. 1 at the air-tight receiver) through the chamber, and will raise No. 1 to the position it occupied while quiescent, and cause the rod of No. 2 to pass through the chamber. The air in No. 2 will by means similar to those provided for No. 1 be removed into a similar placed receiver. The air that passed into the receiver of No. 1 will by means of a hinge cause these plates to approximate and remove the air between the plates into the receiver, whence it was obtained. Hence air admitted alternately into each receiver will move the united apparatus in alternate opposite directions. Two tubes and two bars being alternately forced within and without the chamber, and being connected with the right and left wheels of the engine and the first carriage, or other machinery, will act with double power.

**ROYAL CORNWALL POLYTECHNIC ASSOCIATION.—LIGHT AND ECONOMIC BRIDGES.**—Among the more attractive mechanical novelties exhibited at the Royal Cornwall Polytechnic Society's rooms, at Falmouth, may be mentioned the models of the very cheap and elegant bridges invented by Mr. Angelo Sedley, of Regent-street, London, and which have upon several occasions been favourably referred to in the columns of the *Mining Journal*. It will be recollected that a series of conclusive tests were made upon the day previous to the closing of the recent International Exhibition. The model was 17 ft. 6 in. clear span, and its total weight was 25 lbs. The extreme width was 8 inches, and the extreme height 4½ in.; whilst this veneer and plate, fastened together with glue, were the only materials used in its construction. From the general appearance of the model few, not connected with the engineering profession, would have been inclined to trust a single pound weight upon so aerial a structure; and we do not hesitate to state that even the engineers present were surprised that such a bore one-tench weight which actual testing proved it to be capable of sustaining. The weights were provided in the shape of bags of stones, containing 20 lbs. each, and the following tests were then successively applied. In the first place, 250 lbs. were distributed over the entire span, and the result was a deflection of ¼ in. only. Then 350 lbs. were placed over the centre, when a deflection of 1 in. was produced. To still further test it, 480 lbs. were distributed over the clear span, which produced a deflection of 1¼ in., and upon the weight being increased to 503 lbs. the deflection was 1½ in. At this point of the experiment the piers sunk into the soft ground, and the bridge, consequently, became twisted, less. It was, however, suggested that the weights should again be applied on the centre, and upon 503 lbs. being reached (the weights were piled in a pyramid over the centre) the bridge gradually broke down, the fracture occurring about 3 ft. from each, and the centre remaining unharmed, and showing no signs of damage. The result was admitted by those who had previously been most opposed to the principle to be most successful in every respect, and we cannot see how any other conclusion could have been arrived at. The breaking strain of a bridge 1050 ft. span (the scale indicated by the model tested) on Mr. Sedley's system was twenty times its own weight, whereas in the experiments made before the Metals Tests were built, on the small model of the same, the breaking weight for a span only two-fifths of the above was twelve times the weight of the model operated on, thus clearly establishing the success and truthfulness of Mr. Sedley's system, and its capability to sustain great weights. We understand that Mr. Sedley is building a bridge upon this principle for a park at Staplehurst upon a small scale, 40 ft. span, and is also engaged about another in Wharfedale of 180 ft. span. With regard to the strength and lightness of these bridges, it would, perhaps, be difficult to give better evidence than that contained in the report of the experiments above alluded to, whilst as to economy it is only necessary to state that a wooden foot or bridge road bridge, 60 ft. clear span, 4 feet wide, and equal load of 20 cwt. can be constructed for 500 cwt. and that the bridges are delivered at any railway station in London of 30 ft. span and 4 ft. wide in wood, steel, and of the same dimensions in iron for 500 cwt., whilst bridges of this construction bear

without deflection nearly four times the weight considered to be necessary by the French engineers, and twice that estimated by English engineers.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

SEPT. 17.—The Coal Trade continues to improve slowly, and the exports from the north-eastern ports during the last month have been good, having been 400,641 tons, against 416,069 tons in August last year. This, on the whole, is a satisfactory result. A considerable increase has taken place at the principal ports, although a corresponding decrease has occurred at some of the minor ports. The Iron Trade continues to progress most satisfactorily, there being a good demand for pigs and iron of every description, with rising prices. It is worthy of notice that previous to the discovery of the Cleveland ore the total number of smelting-furnaces in the district was 32, but since that most important discovery 73 furnaces have been erected, thus making the total number at present in blast 105. Several others will shortly be added to this total. The price of Pig-Iron at Middlebrook at present is—55s. per ton, f.o.b.; No. 2, 54s. per ton; No. 3, 53s. per ton; No. 4, forged iron and mottled, 51s. per ton; white, 60s. per ton. Ships are rather scarce in the north-eastern ports at present, and consequently freights are high. Coal freights to London are from the Tyne 7s. per ton, and to other ports at corresponding rates.

A most lamentable accident occurred in a new shaft sinking at the Black Boy Colliery, on Saturday last, by which four men were killed. A shaft was being sunk at this place by Mr. Coulson, the well-known sinker, he having contracted for the same, and on the day in question a cradle was lowered, and several men descended, for the purpose of inserting a pipe into the metal tubing, intended to relieve the pressure on this tubing, the point where this pipe was to be inserted being 54 fms. from the surface and 51 fms. from the bottom of the shaft. The men on the cradle were John Elwin (manager), George Elwin, Henry Davison, Richard Waggott, Wm. Bell, Wm. Green, and Mr. Coulson, the contractor. Mr. Coulson stated at the inquest that the men were engaged when he descended in securing a wrought-iron pipe to some others below, and when that was effected they prepared for putting a water-tap in the nozzle or branch-pipe from the tubing, and when doing so the cradle canted over so much on one side that four of the men were thrown down the shaft and killed. This melancholy result, it appears, was entirely unexpected, the cradle being lashed to the tubing in order to keep it steady. The men killed were three of them married, and having families, while the fourth was the support of an aged mother. The cradle was only half the size of the shaft, owing to a brattice dividing it, and from this cause would not be so steady as a cradle the full size of the shaft; and from some cause it appears the men must have loaded the cradle unequally, or in some way in performing their operations, have caused it to swing on one crane. Sinkers, it is well known, are very enterprising, and, from their constant exposure to danger in shafts, become almost fearless. This melancholy case, however, should teach them the necessity of caution in pursuing their dangerous avocations. A verdict of "Accidental Death" was returned by the jury.

The following is a return of the state of the blast-furnaces of the district on Sept. 1, 1863:—

	In.	Out.	Total.
Easton—Bolckow and Vaughan	9	0	9
" Clay-lane Company	3	0	3
" South Bank Company	3	0	3
Cargo Fleet—Jones, Dunning, and Co.	2	0	2
" Cochrane and Co.	4	0	4
" Gilkes, Wilson, Pease, and Co.	4	1	5
Middlesbro'—Bolckow and Vaughan	3	0	3
" Hopkins and Co.	3	0	3
Port Clarence—Bell Brothers	5	1	6
Norton—Warner, Lucas, and Barrett	3	0	3
Stockton—Holdsworth and Co.	3	0	3
Thornaby—W. Whitwell and Co.	8	0	8
Darlington—South Durham Company	5	0	5
Witton Park—Bolckow and Vaughan	4	0	4
Stanhope—Weardale Iron Company	0	1	1
Towlaw Weardale Iron Company	4	1	5
Consett—Derwent Iron Company	6	13	19
Total	63	17	80
All places, Sept. 1, 1858	61	14	75
" " 1859	62	15	77
" " 1860	62	22	84
" " 1861	65	28	93

#### REPORT FROM MONMOUTH AND SOUTH WALES.

SEPT. 17.—The position of the Iron Trade has not materially changed since my last report, and matters remain in about the same state at the different works. No definite action has been announced as yet on the part of the puddlers, and there is evidently a want of that unanimity which characterised their movements a few years ago. The difficulty, I apprehend, is as to who will take the lead in applying for an advance, and once this is done, then it may naturally be expected that the example will be followed at nearly all the works. The ironmasters of the district are well supplied with orders, and the future is looked forward to with confidence. Merchant bars are quoted 6l. 5s. to 6l. 7s. 6d., and there is not an order booked at lower rates. The colliers of the district are more forward in their demands than the puddlers, for they have already held meetings and consultations, and it is pretty clear that they will make a determined effort to obtain a rise. I do not mean to assert that a turn-out will be the result if their demands are not satisfied; and it is only right to state that at the meetings referred to, a strike was generally deprecated, as such a step had always ended in placing the collier in a worse position than before. The arguments that can be adduced in support of an advance to the colliers are not so strong as in the case of the puddlers, and this is easily proved. There has been a clear advance of from 10 to 15 per cent. in the price of iron within the last twelve months, but the colliery proprietors, with perhaps a few exceptions, have not succeeded in obtaining one penny advance. It is true that the demand has improved of late, and that some of the coalmasters are holding out for higher prices, and I think there is a probability of their being able to secure the same. This, however, is only an expectation, and expectations are often treacherous. I am informed that the coalmasters entertain rather decided views on the point, and that it is quite clear that the application will not be acceded to, at least for the present. There is a good business doing in the Coal Trade, more especially steam, and the Cardiff shippers continue unusually busy. The house coal trade has also slightly improved, and the colliers are more regularly employed.

The Lynton Valley Railway Company are making preparations for running passenger trains between Bridgford and Maesteg. This is a wise step, and there is no doubt that the public and the proprietors of the line will be materially benefited by the course determined upon.

A frightful accident occurred on Monday afternoon at the Radyr Quarry, near Cardiff. The quarry is worked by the Penarth Harbour, Dock, and Railway Company, and there are about 150 hands employed. The stones are raised from the quarry to the railway-trucks by means of travelling cranes, worked by small steam-engines, and supported by timber scaffolding. On the day named, one of the longitudinal timbers gave way, where there was an iron bolt placed to make it more secure, and the engine, crane, and parts of the timberwork fell with a fearful crash. Three men were buried in the ruins, and killed, and several others were more or less injured. The inquest was held on Wednesday, and Mr. Samuel Dobson, engineer of the works, and Mr. George Fisher, general superintendent of the Taff Vale Railway Company, deposed to having made a careful examination as to the cause of the accident. Mr. Dobson said there was no positive proof as to how the accident occurred, and Mr. Fisher gave it as his opinion that a defective bolt was the cause. All the timberwork was constructed of the most substantial materials. The coroner (Mr. Reece) having summed up, the jury, after a few minutes consultation, returned a verdict of "Accidental Death."

A special meeting of the Bristol and West of England Railway Wagon Company was held on Tuesday, at the Commercial Rooms, Bristol, for the purpose of taking into consideration the propriety of increasing the capital, and other matters. Mr. J. Perry occupied the chair. It was stated that there was an idea of starting an opposition company, and negotiations had been entered into with the view of preventing this taking place. The Chairman remarked that there was no doubt that the company was in a very strong position, but if they had a strong opposition, they would have to be content with lower prices and smaller profits. It was, therefore, far better that some arrangement should be made with the promoters of the new company. Resolutions were then passed increasing the capital from 100,000l. to 200,000l., by the creation of 10,000 new shares, of 10l. each; 3000 of the shares to be issued at par and 7000 to the holders of the occasional shares; 3000 to be issued at a premium of 1l. per share to the promoters of the new company, as soon as they have introduced approved business to the extent of 30,000l., and the remaining 4000 shares to be dealt with as the directors might think fit. It was agreed that the directors should be at liberty to purchase or take a yard and premises at Swansea, or some other suitable position in South Wales, for the building and repairing of railway waggons, and to let the same to the company's builder on such terms and conditions as they shall think fit. A resolution was next passed to the effect that the company should be registered under the Limited Liability Act, and the name should be changed to that of "The Bristol and South Wales Railway Wagon Company (Limited)."

The half-yearly meeting of the Monmouthshire Railway and Canal Company was held at the offices, Newport, on Wednesday (the Right Hon. Lord Tredegar in the chair). The report, which was of a very satisfactory nature, was unanimously adopted, and a dividend at the rate of 5½ per cent. per annum was declared for the half-year. Mr. Batchelor suggested that part of the line should be relaid every half-year, and then they would not be suddenly called to relay seven miles at once, as was the case at present. The directors explained that the relaying of the road from Newport to the West Midland Junction had been determined upon, not because it was unable to bear the traffic of the Monmouthshire proper, but in consequence of the Great Western and the London and North-Western Companies running their fast and heavy trains over it. Mr. Bailey, of Shrewsbury, referred to the sale of the old Ramsey line to Messrs. Savin and Ward, and complained that the directors had not attended to the wishes of the shareholders, in leaving that railway to pass into other hands. In his opinion the old Ramsey was intended to form part of the Monmouthshire system. Mr. W. Jenkins, Mr. C. W. Savery, Mr. E. J. Phillips, and several other directors, stated that they considered the price asked (110,000l.) far too high. The line had been bought by a friendly company, and there was no doubt that a large through traffic from Aberdare, Merthyr, Brecon, and North Wales would be the result to the Monmouthshire. The meeting was then made special, and an agreement with the London and North-Western Company to give the latter traffic facilities and station accommodation, was unanimously agreed to. The announcement that Mr. F. G. Saunders, the secretary and general manager of the South Wales Railway, would continue to occupy his present position, has given genera



satisfaction throughout the South Wales district. A secretary and manager of such an extensive railway as the South Wales, requires no little tact and ability, as so many difficulties have to be surmounted, and that without displacing the public. In Mr. Saunders' business capacity, experience and an obliging disposition are so blended, that he has always stood well in the estimation of the public, and more especially of that powerful body—the freighters on the line.

The following patents were sealed last week:—Messrs. John Harris and Joseph Butler, Pontypool, Monmouthshire, and Mr. John H. Fraser, Llanvachell Upper, Monmouthshire, for improvements in machinery for rolling armour-plates, bridge-plates, boat-plates, and other plates, and bars of iron. Messrs. W. J. Clapp and N. Costa, Monmouthshire—Improved armour-plates for vessels, targets, forts, and other structures in which armour-plates are or may be used.

Amongst the list of bankrupts in Tuesday's *Gazette* is the following:—C. H. Waring, near Neath, Ironmaster.

Mr. S. B. ROGERS.—The funeral of this esteemed and lamented gentleman took place on Friday, at Llanfoist, near Abergavenny. Besides the immediate members of deceased's family, the following gentlemen were also present to pay their last tribute of respect to one whose talent and knowledge had so materially contributed to the prosperity of the district:—Mr. W. Habbakuk, Newport; Mr. Hingworth, Newport; Mr. W. Adams, Ebbw Vale; Mr. W. Needham, Beaufort; Mr. Menelaus, Dowlais; Mr. D. Habbakuk, Nant-y-glo; Mr. Elias James, Blaenau; Mr. Charles Jordan, Newport; Mr. John James, Blaenau; Mr. George Underhill, Blaenau; Mr. James Phillips, Nant-y-glo; Mr. Thomas Parry, Blaenau; Mr. William Parry, Blaenau, &c.

The arrivals at Swansea include—the Europa from Alicante, with 211 tons of silver ore, for Dillwyn and Co., and 117 boxes, containing 1 cwt. 1 qr. 2 lbs. of silver ore, for Richardson and Co.; Gertrude Antina from Genoa, with 3389 bags containing minerals, for Henry Bath and Son; Delawara from Coblenz, with 460 tons of copper and 100 tons of copper, unwrought in pigs, for Henry Bath and Son; Undanied from Cherbourg, with 168 tons of iron ore, for the Dowlais Iron Company; Zebina from Pan des Azures, with 700 tons of copper ore, for Richardson and Co.; Liberator from Wailor, South Australia, with 770 tons of copper ore, for Richardson and Co.; Salttram from Cherbourg, with 160 tons of iron ore, for the Dowlais Iron Company; Zouave from Cherbourg, with 110 tons of iron ore, for the Dowlais Iron Company.

NEATH HARBOUR.—Abstract of the trade of the port of Neath (including the Briton Ferry Docks), for the month ending Aug. 31, 1863, and corresponding months 1862:—

No. of vessels.	Tons regis.	Tons bdn.	No. of vessels.	Tons regis.	Tons bdn.
European trade.	18	1,540	27	2,351	3,416
Coasting trade.	233	17,495	264	18,604	38,555
<b>Total</b>	<b>251</b>	<b>19,035</b>	<b>291</b>	<b>20,955</b>	<b>41,971</b>
<b>IMPORTS.</b>	<b>1863.</b>	<b>1862.</b>	<b>EXPORTS.</b>	<b>1863.</b>	<b>1862.</b>
Copper ore	3,409	5,038	Coal, coke, and culm	25,098	28,359
Pig-iron	1,110	1,310	Copper	207	61
Iron ore	4,590	4,666	Bar-iron	1,084	1,166
Grain and flour	722	498	Tin-plates	281	219
Timber	60	540	Timber	—	—
Pit and cord wood	680	403	Miscellaneous	350	451
Miscellaneous	404	283			
<b>Total</b>	<b>10,981</b>	<b>12,738</b>	<b>Total</b>	<b>27,020</b>	<b>30,283</b>

FATAL EXPLOSION IN A COAL PIT.—On Monday last the coroner for Bristol, Mr. J. B. Grindon, held an inquest by adjournment respecting the death of Richard James, aged 26, a collier, who died on Sept. 3, at the Bristol General Hospital, from injuries received during an explosion of gas at the Malaga Vale Colliery, Redmister, on August 26. From the evidence previously taken it appeared that the deceased, who was fearfully burnt, had entered one of the workings in company with two other men who had taken candles and a bucket of water to the surface of the coal, the noxious gas was swept to the deceased's candle and suddenly exploded. Mr. L. Brough, the district Inspector, attended the enquiry on Monday, and narrated some interesting facts connected with the case. He provided the coroner with a carefully-prepared plan of the mine, showing the exact spot where the accident occurred. The coroner explained the plan to the jury, and said he thought it was clearly the result of an accident, but they would have to consider whether it was unavoidable, or whether it was attributable to neglect. Further evidence was then adduced, and one of the witnesses, in reply to a juror, said that the men when they knew of the existence of gas usually took their candles, a bucket or some piece of clothing, and went out the gas, but they did not do so that morning. Mr. Brough remarked that in Wales in all the gassy collieries, if they found any of the men beating gas out with their clothes, such men were sent to prison for three months' hard labour. This was not a gassy colliery, it did not come under the same rules, but in future he would have the rules altered and assimilated to the rules he had mentioned, and if the men beat out the gas with their jackets or other clothing they would be imprisoned. There was not a more reprehensible practice than this, and the chances were that the dangerous gas would be brushed under or upon the light; the pit must be swept by pure air. From the evidence of other witnesses, it seemed that plenty of safety-lamps were provided by the managers of the pit, but they were not used. The coroner, in summing up, observed that the evidence tended to show that the accident was occasioned by the over confidence of men accustomed to danger. The jury, after some deliberation, returned a verdict of "Accidental Death," but at the same time they considered the underground balliff deserved to be censured for allowing the men to go to work where gas was known to exist with naked candles. They trusted the managers would strictly enforce the rules, and allow no man to enter the workings before the balliff had ascertained that they were safe. During the enquiry Mr. Brough said there was a deficiency of air in the pit, in consequence of which he was at present, and had been for some time, in litigation with the company, and he hoped to get a second shaft made there, but that would cost some thousands of pounds. However, there was so little gas in the pit that no one would be burnt if common care were used.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

SEPT. 17.—It is now the general belief that at the preliminary quarterly meeting of ironmasters next week a further advance of 10s. per ton in the price of iron will be made, making 1l. on the prices of the commencement of the quarter, which was the advance many advocated at the time 10s. was put on. There can be no doubt that the demand is now very good, and that orders have for some time been refused, except at quarter day's prices, and some have been taken at an advance of 10s. on the last rise. The main ground for expecting this improvement in the demand to continue is the splendid harvest, which the present fine week will all but entirely see safely housed, and which will unquestionably add a very large sum to the annual income of the country. This must unquestionably influence trade generally, and the iron trade is one of the first to feel any impetus, as iron enters largely into almost every new undertaking. Pig-iron is firm at a considerable advance. It is remarkable that Staffordshire pig-iron, and that not of the highest quality, is going to Sheffield, probably to mix with hematite iron, with which it forms an admirable union, giving to the hardness of the iron the ductility and toughness in which it is deficient. The demand for coal is steadily increasing, and as winter advances will probably become brisk. The wages question is being steadily adjusted, and though in some branches there are matters not yet arranged, there is a good prospect of adjusting all difficulties shortly.

A new application of steam locomotive power for this district has been made by the production of small engines, capable of drawing the trams on the narrow trackways in collieries. Already several of these engines are at work, and thus the use of horses is economised by a power which consumes nothing when not at work. The *Birmingham Journal* says:—"The Parkfield Iron Company have just placed upon the rails, which extend from their furnaces to one of their collieries, a quarter of a mile away, a colliery locomotive, which bids fair to result in a saving to its owners of 500l. a-year. The difficulty has hitherto been to construct a locomotive of a sufficiently narrow gauge, and that could be worked round the sharp curves that are now and again to be found upon colliery trackways. Such an engine, it is thought, has now been obtained. It was placed a fortnight ago upon the ordinary railway which had previously been worked by teams, and it has been running ever since. We draw attention to it here because of the great economy which would seem to be the result of its use, and the consequent importance of the subject to the coal and iron trades. It is easy to calculate that if a locomotive will displace 15 or 20 horses, and its original cost is (say) 300l., such a saving as we have indicated must result from its adoption; and that even where fewer horses are required to be supplanted, to employ the locomotive would be attended with less cost than to keep teams to do the same work. The Parkfield Company speak in terms of high commendation of the locomotive, and of the work that it is doing; and they purpose having several engines built also for colliery work. Three such engines upon their colliery would, they compute, result in a saving of 1500l. a-year. The principal dimensions of the locomotive are—gauge, 2 ft. 5½ in.; cylinders, 6 in. diameter, 14 in. stroke; wheels, 2 ft. 6 in. diameter; centre of the axle, 4 ft.; total length of engine, 12 ft. 6 in. This small engine, with a dead weight behind it of about 14 tons, travels up an incline, the gradient of which is 1 in 60, and of the steeper parts is 1 in 33, at a pace of about six miles an hour. The tank is placed under the boiler, and the total height of engine, from the rail to the top of boiler, does not exceed 3 ft. 9 in., consequently it will travel smoothly and steadily, where very great inequalities of temporary colliery trackways are unavoidable. It is peculiarly adapted for turning short curves, going without difficulty round a curve of 25 ft. radius. The draw bars work on a swivel, the distance between the centres of which and the centre of the axle is only 2 ft. 10 in. We are happy to be able to add that the locomotive has been made in South Staffordshire. The makers are Messrs. R. and J. A. Thompson, of the Pot-house Bridge Works, Bilston; and it is encouraging to know that it is not the only colliery locomotive at work in that part of the county, for, if we do not mistake, there is one running on a colliery between Wolverhampton and Willenhall; but we are told that the one we have here described is the smallest for practical purposes yet constructed. That, however, iron and coal masters will not doubt soon ascertain for themselves. If the results be as indicated, colliery locomotives are not likely to be rarities much longer."

The *Wolverhampton Chronicle*, of Wednesday, says:—"This week such a locomotive engine will be started in the Chillingworth field, in this town, being the third that has been built for and started in this neighbourhood, by Messrs. Smith and Higgs, engineers and machinists, of the Village Foundry, Coven. The first of these locomotives, and the first ever used in this neighbourhood, was placed upon the rails of the Willenhall Furnaces, the property of Messrs. Fletcher, Solly, and Urrish, early in January last. Great difficulties had to be overcome in the use of a locomotive for conveying ironstone and coal to these furnaces, the principal being the extremely narrow gauge of the rails, and two curves of a remarkable character, forming an almost complete "S," in the space of a hundred yards, the line turning twice at almost right angles in this space, and the curves having a radius of less than 20 ft. Messrs. Smith and Higgs, to meet these difficulties, constructed an engine, the principal dimensions of which are—gauge, 2 ft. 6 in.; cylinders, 7 in. diameter, 12 in. stroke; diameter of wheels, 2 ft. 6 in.; number of flutes, four coupled; wheel base, 12 ft.; pressure of steam in boiler, 100 lbs. the square inch; axle weight, in working order, 1 ton 5 cwt. The engine has taken a load of 33 tons up an incline varying from 1 in 30 to 1 in 75, at a speed of about seven miles an hour. It has also taken a load of 14 tons up an incline of 1 in 30. In July last the same makers started another loco-

gine of greater power on the same line, the principal dimensions of which are—cylinders, 10 in. diameter, 14 in. stroke; wheels, four coupled, 2 ft. 6 in. diameter; wheels base, 5 ft. 6 in.; pressure on boiler, 100 lbs. the square inch; weight, 9 tons 5 cwt. This engine has taken a load of 30 tons up an incline of 1 in 20; and one of 100 tons up an incline of 1 in 70, exclusive of weight of engine, in both instances. The third engine to be started this week on the rails of the Chillingworth Company is of larger dimensions than either of these. Its performance have yet to be ascertained; but those of its predecessors above noted sufficiently tell of the value of colliery locomotives, and it is as just as it is complimentary to Messrs. Smith and Higgs to remark that the difficulties of its adaptation in this neighbourhood should have been first overcome at a rural village foundry."

#### REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

SEPT. 17.—The commercial aspect of the country, so far as the Iron Trade is concerned, is most decidedly on the improve, and the past week has brought an addition of orders, not only for the home market, but for exportation. The recent advance in the wages of the puddlers has determined many to look forward to the next quarterly meeting for an advance in the price of manufactured iron, which it is expected will be at least 10s. per ton. This has given rise to many speculative purchases, but how long this improvement may continue remains to be seen. The stocks are generally low, and have been so for a considerable time past, and any indications of activity are soon felt. There is a corresponding increase in activity in the Steel Trade. The demand for heavy castings, gun-metal, and railway material is very considerable, but there is a great amount of caution exercised by merchants as to purchases. Altogether, considering the critical state of political affairs, and the depression existing in the manufacturing districts, the trade is in a more healthy position. The Coal Trade is improving, and the enquiry for the better descriptions of coal is comparatively more active now than it was at this season last year, though the trade cannot be described as active. The manufacturing districts are receiving a greater supply, but the increase in manufacturing industry in Lancashire is very moderate. The strike of the Matherly colliers, though to an extent terminated, is exercising a prejudicial influence on those at work, and meetings have been held in several places with the view to raise funds for the support of men on strike; indeed, to support what is called the Miners' Union. The dispute about the riddling of the coal has been abandoned, and the 7½ per cent. has been agreed to. The formation of unions amongst the colliers appears to be on the increase, and at the present time several men are going over the coal-producing districts preaching to the men, and inducing them to join in a union. The result of their labours does not appear to be crowned with any great success.

Lead mining matter in Derbyshire have never been known to be quieter than at the present time. Owing principally to depressed trade, there has been little doing in the Derbyshire lead adventures. Several mines which have been taken in hand by shareholders have produced nothing; there are some, however, which are doing well, but latterly success has been the exception to the general rule, consequently capitalists have been rather shy in speculating.

The local stock and share markets have been very dull, and we have had little doing except in bank and stock shares. Mining shares are merely nominal. The applications for Letters Patent include Mr. William Taylor, of the Lawton Ironworks, for the manufacture of iron and machinery to be employed in the said manufacture; Mr. Joseph Rhodes, of Morley, for an improvement in piecing machinery; Messrs. J. D. Lee and J. Crabtree, of Shipley, for improvements in looms for weaving.

#### THE BRITISH ASSOCIATION—NOTES.

OUR COAL RESOURCES.—Much misapprehension appears to have been occasioned by that part of Sir W. Armstrong's address at the opening of the British Association meeting at Newcastle regarding the resources of our coal fields. It seems in many quarters to have been supposed that when the President spoke of the probable exhaustion in about two centuries he was referring to the coal supply of the whole kingdom, whereas he distinctly limited the remark to the coal field of Durham and Northumberland, in the neighbourhood. As regards the supply from all our coal fields, the time for exhaustion does not appear to be so near. The overwork will disappear, and be replaced by the mineral structure of the country. When this subject was brought prominently before Parliament during the debates on the commercial treaty with France, I entered into a series of investigations, which were afterwards published in a work on the British coal fields, which I fear (to use Coleridge's expression) is to the public generally "as good as manuscript." Nevertheless, I believe the results there stated are incontrovertible. Adopting the limit of depth at 4000 ft., I found that there was enough workable coal to last, at the rate of consumption for that year (about 71,000,000 tons), for nearly 1000 years, and even if the consumption should ultimately reach 100,000,000 tons, that supply could be maintained for 700 or 800 years. But there are many persons well qualified to give an opinion on the subject who maintain that there is no reason why the most valuable seams should not be followed to even greater depths than 4000 ft. I adopted that depth on considerations connected with increase of temperature and pressure; but it would be highly presumptuous in anyone to assert that these physical obstacles cannot be overcome. Already a depth of nearly 1000 yards has been reached in a Belgian colliery, and coal is now being extracted from depths of 700 and 800 yards in Lancashire. Even with the vertical limit of 4000 ft. I have since found reason to believe that the estimate I arrived at in the case of the South Wales coal field was rather under than over the truth. In that coal basin alone, with an area of 906 square miles, I calculated that the rate of consumption for 1850, of 9½ millions of tons, could be maintained for 1600 years; but it is only right to state that Mr. H. Vivian, M.P., in a pamphlet published by him in 1861, controverts this view, and arrives at the conclusion "that South Wales could supply all England with coal for 500 years, and for her own consumption for 5000." From this it will appear that whatever error there may be in my estimate, it is not one of exaggeration. As regards the absolute quantity of mineral fuel in this island, it may be considered as practically inexhaustible. The seams of coal outcrop in our coal fields, and descend under the Permian and Triassic formations to depths exceeding 10,000 ft. The question of the available supply is, therefore, one depending on the rapidity of production and the limit of depth. For the present, however, and for generations to come, the commercial and maritime supremacy of Great Britain is in no danger of being impaired for any want of coal.—EDWARD HULL: *Geological Survey, G.B.; Manchester.*

EXHAUSTION OF COAL.—The observations of Sir William Armstrong on the subject of coal, in his recent philosophical address to the British Association at Newcastle, seem to have excited public attention. Accordingly, several letters on the subject have appeared in the *Times*, and, with your permission, Sir, I will add another. Coal is a reservoir of force, which has been derived exclusively from the sun, and which it has required countless ages to accumulate. The element in coal of chief importance as a source of heat, and, therefore, of power, is carbon; and that carbon has been abstracted from the carbonic acid originally existing in our atmosphere by plants under the influence of sunlight. Some have supposed that time was when our atmosphere was so strongly contaminated with the poisonous acid that man and the higher animals could not have existed; and some suppose that time will be again when, owing to the combustion of wood and coal, the same condition will occur. Everything terrestrial is subject to incessant mutation; and everything celestial too, if faith is to be placed in the observations and deductions of astronomers. Since the beginning of the world, our own earth may one day abate no more. Speculation is now rife as to the probability of our coal fields, and vague conjectures are put forth which have no solid foundation. We are assured, on the one hand, that these coal fields are "practically inexhaustible," and, on the other hand, that in a few centuries, at farthest, our mineral fuel will be gone. The expression "practically inexhaustible" is nonsense, whatever meaning be attached to the adverb qualifying the adjective. The period of exhaustion must come, and perhaps sooner than expected. It will not be in our time, and this so far is a consolation; but no man has sure grounds for predicting the date of its advent. Our copper, our iron, and our coal, are all rapidly disappearing, and our own cost must be better. We cannot cut our cake and have it. We have reason to rejoice in the abundance of our mineral resources, and our successors will have none to regret their exhaustion, inasmuch as, by their present development, we are laying the foundation for the future prosperity of our race in nearly every part of the habitable globe. Great Britain is not to endure for ever in the fulness of her power in one spot, but will hereafter be represented by Anglo-Saxon nations scattered far and wide. The consideration of the waste of coal, both in its getting and consumption, is, I submit, far more likely to lead to important practical results than idle speculations concerning the duration of our coal fields. That there has been great waste in both, especially in the home market, is a fact which no one who has been in the neighbourhood of our coal fields, and who has seen the waste in mining, can doubt. Some time ago the great colliery viewer of the North of England, Mr. Nicholas Wood, asserted that in two collieries alone 160,000 tons of small coal were annually wasted. Now, every ton of that coal contained a nearly equal amount of heat-giving power to a ton of the same coal in lumps; but, under existing conditions, the former cannot be profitably used so long as the latter can be supplied at present prices. Improvements in the arts take place gradually, and from those which have recently been effected in furnaces there is reason to believe that the time is not far distant when every pound of small coal will be consumed with advantage, and pits which are now abandoned as worthless will be worked over again with profit. This has actually occurred in some localities. In South Staffordshire, for example, many of the old "thick coal" collieries have been worked several times over. So long as this small coal is not uselessly and wickedly burnt it will not be wasted, but will prove a valuable inheritance for those who come after us.

While all owners of colliery property are eager to convert their coal into money, and very naturally so, there will necessarily be the fiercest competition, and prices will be low, and so long as prices are low there will be prodigality in the consumption of coal. This cannot be prevented, except by legislative restrictions, which would be as impolitic as unjust to the possessors of real estate. Manufacturers who require much coal will never be driven to adopt improved methods of burning it except by a rise in price. It is only a few years ago when at every blast furnace in the United Kingdom the valuable combustible gas escaping from the mouth was allowed to pass unconsumed and unutilized into the atmosphere, and this is still the case with many; but, owing to competition in the iron trade, and the increased value of labour and materials, this gas is now economized with great pecuniary advantage in many of the largest ironworks. In one establishment alone the saving is estimated at 15 cwt. of coal on every ton of pig-iron made. Earnest efforts are now being directed to the economy of fuel in many large manufacturing works; and there can be no doubt that the results will be entirely successful. That the waste of coal in our common fire-places is very large has long been demonstrated, especially by Count Rumford, about 60 years ago,—whose labours, Sir, seem to have been forgotten by some of your contributors. His admirable essays on the subject deserve present attention, and might be profitably studied by architects, especially as they contain, in addition, much valuable information on that opprobrium of the profession—ventilation. Perhaps the time may come when cheap gaseous fuel, or even heated air, will be regularly supplied to our houses, and then we may anticipate a smokeless London. This is no idle dream. I will venture to play the prophet, and predict with confidence that it will be done, though I may previously have considered it chimerical. When our coal shall have been all exhausted, post-boys will remain; and great things not only may be, but are actually accomplished even with this kind of fuel. Part is extensively used on the Continent for various important metallurgical and other manufacturing operations. The bogs of Ireland may have a glorious future; and our successors in the Emerald Isle may taunt their contemporaries here with the scanty supply of this prime necessity of life.

There may yet remain plenty of coal in the world. Three-fourths of the globe are covered with water, and what geologist shall presume to declare that there are no vast deposits of coal beneath the ocean bed? We have been up and down below the waters in several times, and we shall probably sink again; but then the bed of the Atlantic may become dry land, and peopled with our successors. Change is the law of the universe. The moon is stated to be approximating to the earth at the rate of a fraction of an inch

in a century or so, and may one day come tumbling upon us. The whole of the solar system seems to be travelling—some report at the slow rate of 47,000 miles an hour—towards an unknown region of infinite space. Great Britain, therefore, has no reason to complain if she shares the common fate of all things, whether in the heavens above or on the earth beneath.—Y. Sept. 14.

OUR COAL RESOURCES.—The admirers of my honoured father cannot but be pleased to see that "W. C. L." quotes his authority as regards this important subject. In answer to the query of "W. C. L." as to whether geologists can confirm or refute the Dean's statements, I beg to call attention to the annotations of Mr. Robt. Hunt, of the Mining Record Office, to the Dean's chapter on the "Beneficial Deposition of Coal Strata," as published in Routledge's edition of the "Bridgewater Treatise," 1838. In 1838 Dr. Buckland wrote:—"The destruction of coals on the fiery heaps near Newcastle, although diminished, still goes on to a frightful extent that ought not to be permitted, since the inevitable consequence of the practice, if allowed to continue, must be in no long space of time to consume all the beds nearest to the surface and readiest of access to the coast, and thus enhance the price of coal in those parts of England which depend on the coal field of Newcastle for their supply, and, finally, to exhaust the coal field at a period nearer by at least one-third than that to which it would last if wisely economized." To this Mr. Hunt appends the following:—"This practice is greatly diminished, but there is still a great and inexhaustible waste of coal in all our great coal-producing districts."

The Dean then writes:—"This highly-favoured country has been enriched with mineral treasures in her strata of coal, incomparably more precious than mines of silver or of gold. From these sustaining sources of industry and wealth let us help ourselves abundantly, and liberally enjoy these precious gifts of the Creator; but let us not abuse them, or by wilful neglect and wanton waste destroy the foundation of the industry of future generations. A further consideration of national policy should prompt us to consider how far the duty of supporting our commercial interests and of husbanding resources of posterity should permit us to allow any extensive exportation of coal to a densely-peopled manufacturing country like our own, a large proportion of whose present wealth is founded on machinery which can be kept in action only by the produce of our native coal mines, and whose prosperity can never survive the period of their exhaustion." Mr. Robert Hunt's note to the above passage is this:—"All calculations on the probable duration of our coal fields have been founded on the very erroneous data which supposes that not more than 36,000,000 tons of coals are raised annually. We know that more than 66,000,000 tons of coals are now annually produced, and the demands upon our resources are rapidly increasing. The last paragraph has, therefore, far greater force at the present time than it had at the time it was written."

Sir William Armstrong himself quotes Mr. Hunt as showing "that at the end of 1861 the quantity of coal raised in the United Kingdom had reached the enormous total of 86,000,000 tons, and that the average annual increase of the eight preceding years amounted to 2½ millions of tons." If, therefore, Dr. Buckland's remarks were important in 1838 (when his "Bridgewater Treatise" was first published) and of "greater force" in 1858, how much more must they be worthy of serious consideration in 1863; and I trust the memory of this distinguished and practical geologist will be honoured by attention to his warning voice, though he himself is no longer among us.—FRANK BUCKLAND, M.A. (late Assistant-Surgeon 2d Life Guards): *Athenaeum Club.*

AN ELECTRO-MOTIVE ENGINE was exhibited and described by Mr. W. Ladd. The machine consisted of two coils, forming a powerful electro-magnet, revolving on an axis parallel to the axes of these coils, and at equal distances between them. On the revolving electro-magnet, and on the axis, were planted in the circumference of a circle round the revolving electro-magnet, and at such a distance from it as just to permit its free motion. By a simple contrivance, similar to the common electric motor, the electric current was so transmitted and reversed as to make each of the pillar coils a magnet with its pole presented to that of the revolving coil as it approached it, of the opposite name, south or north, but the instant it passed, reversing it into one of the same name; thus, while advancing it is attracted, but the instant it begins to retire, repelled, and as a constant motive force is applied to keep it revolving. The engine exhibited was mounted with bevel wheels, carrying an axle, on which a cord could wind up a weight of some pounds. It was also furnished with a friction-break, by which its power, which was, even with only two Grove's cells, considerable, could be exactly measured.

#### FOREIGN MINING AND METALLURGY.

The Liège Chamber of Commerce has just published its report on the situation of industry in its district during 1862. The report offers some "appreciations" on the general position of metallurgy, which are correct not only as regards the Meuse group, but also with respect to other producing centres. "The sale prices," says the report, "have again given way. From 27. 14s. per ton for ordinary white pig, and 27. 18s. per ton for hard white pig, which were the normal rates of the last months of 1861, they fell in 1862 to 27. 12s., and 27. 16s. per ton for the same descriptions. The stock on hand in the Liège district has increased, the sale or transportation in the different works not having completely covered the total production of the furnaces. As in 1861, so in 1862, the export of pig from the works of the province of Liège to the Zollverein attained a total of 2400. It fell, however, as regards Holland to 517, showing a reduction of 401, on the total of 1861. A portion of the products of one of the Liège works has been forwarded to rolling works in the neighbourhood of Charleroi, the furnaces of the Sambre group having delivered into France such considerable quantities of pig as to render the supply of the iron-works on the spot a matter of some difficulty. An early modification in the present situation can hardly be hoped for as regards the exportation of pig from the Liège group of works. The sole outlets for the products of these works, irrespective of local consumption, are for refined pig the Belgian provinces, and for casting pig the Rhénish provinces, Switzerland, and Holland; but, as the Chamber anticipated in its report on the trade of 1861, the Rhénish works have succeeded in considerably reducing the price at which they deliver pig for consumption. The duty levied on the Prussian frontier is fixed by treaty (dated March 28, 1853) as follows:—On Belgian pig at 1l. per ton up to the end of the year, and at 15s. per ton on and after Jan. 1, 1854, adding transport expenses for Cologne and Ruhrort. Liège is burdened with charges to the extent of 1l. 8s. per ton during the current year, and 1l. 3s. per ton in 1864 and subsequent years. Liège refining pig costs, then, delivered at the destinations indicated, 4l. per ton for ordinary qualities, and 4s. 4s. per ton for hard iron, while the descriptions of pig are at present quoted by the local works at 3l. 5s. per ton (ordinary), and 3l. 9s. per ton (hard). The quantities of the local pig are also stated to be superior to the hard white pig of the Liège works. Grey pig for the best iron and hard plates costs at the Liège works 3l. 12s. per ton, with transport expenses and Customs' duties, 4l. 8s. per ton, the same pig from Rhénish works costing on the spot 3l. 15s. per ton. Scotch casting pig has for some time been delivered in Switzerland, the Rhine, and Holland at prices below the rates to which Liège works can descend; and Belgian casting pig is only employed in cases in which the first, less resisting, must be reinforced. It results from these various conditions of the market, that the modification of the works of the province of Liège can scarcely be hoped for, that the production of pig in the district is reduced to the total at which the internal consumption now stands, that total being, it should be always understood, susceptible of extension beyond its present limits by the creation of new means of elaboration or transformation of products. This situation has been foreseen, and in proportion as difficulties as regards the export of pig have become revealed, works possessing furnaces and iron manufactories have imposed upon themselves heavier sacrifices in order to increase the means of producing the latter; and pig, the "placing" of which had become difficult in other directions, has been transformed into iron, principally rails. The large mass of late year shifted. Belgian metallurgy, in competing for the supply of fixed material required for railways in the Netherlands, Spain, and Italy, has found itself in these markets in the presence of the metallurgy of Germany; and, in victory has remained in several instances with Belgian works, it is because having been forced to seek for outlets for their products, they have delivered them at prices offering little remuneration, and have accepted conditions of guarantee which their competitors have refused. This situation is precarious and full of difficulties for our works, in consequence of the less favourable conditions in which they find themselves placed as compared with English, especially in consequence of the differences existing with regard to transport expenses. These expenses form a very considerable element in the cost price of Belgian pig; they weigh in relative proportion to the price of the product, and direct products of pig, and represent more than a fourth of the price of the product when they pass the frontier. If this situation is compared with that of the English works, which find all raw materials under conditions of production such as Belgium does not possess, and which load ships in some cases at their own ports with their manufactured products, it will be understood that without seeking for any protection for their industry, proprietors of Belgian works have grounds for asking that transport by navigable means of communication and the network of the State system of railways should be reduced to the lowest limit. The cost of transport by railways and canals, minerals arriving at works, and also of the products of these minerals—pig, iron, rails, &c.—to the port of embarkation, weighs on Belgian exported products, and constitutes very often, as regards pig, iron in bars, and rails, the essential cause of the non-success of contracts negotiated. The transport expenses by railways and canals of materials destined for exportation must be reduced, so as to make those means of communication promote the development of industry and commerce, according to the principle of their creation, and they must not be fixed in opposition to this same principle, with regard merely to the direct profit likely to result from the working of the lines. The Chamber accordingly expresses a hope that the transport of raw materials and industrial products should be burdened as little as possible. The future of Belgium, and consequently the future of the State, but it asks to be sustained by modifications of transport tariffs in the struggle in which it finds itself engaged with a rival all-powerful by the natural conditions referring to the raw materials used in its production, and by the facilities which a marine without equal in the world procures for export purposes. "Transport at a cheap rate" appears to be the general cry of Belgian industry. From Charleroi it is reported that a new contract for 5000 tons of rails has been concluded on Spanish account by the Syndicate of Belgian firms; deliveries are to be made in the course of 1864. The firmness in price which has appeared of late is persistently maintained, especially as regards pig, which is in much demand; hence it will not be surprising if a rise appears in this article more quickly than in iron. The masonry work of a blast-furnace on the Fabry system, which a company is about to establish at Couillet, and which will be from 20 ft. to 25 feet in height, and about 16 feet in width, has been commenced. Casting pig is quoted 3l. 12s. to 3l. 14s. per ton, with a scale of 2s. between the numbers; refined pig stands at 3l. to 3l. 4s. per ton, according to quality.

With respect to the French iron trade, it may be noted that the rise announced last week as only having been made by a part of the works has become comparatively general; in fact, 9l. 12s. per ton for rolled iron from wood-produced pig (in warehouse at the works) is an established quotation. The scale between the classes is 8s. per ton. Rolled iron from mixed pig has also risen; their price is 9l. per ton in warehouse at St. Dizier, with a scale of 8s. per class. Machine iron has not experienced a rise, No. 20 standing at 10l. 4s., and No. 21 at 10l. per ton, in warehouse at the works; free at Paris, 12s. 6d. per ton in addition. The price of machine iron from mixed pig is 4s. below that from wood-produced pig. This rise, although it takes place after very heavy supplies have been received, and although it does not appear very serious to merchants, has, nevertheless, slightly checked orders; still a fair amount of business has been doing at present quotations. It is confidently affirmed that the rise which has taken place in the Champagne district will find itself corroborated by a similar augmentation which the other groups must announce in the first fortnight of September. It is thus stated from the Moselle that that district is on the point of establishing a rise of 8s. per ton; and at Paris a similar step is in contemplation. The firmness which is everywhere displayed is, perhaps, the prelude to this improvement, but at present further advance must be received before the advance can be definitely announced. Hammered iron remains without change at previous rates. No transactions have been reported in pig for the St. Dizier market, but in the Basle district a furnace has placed 2000 tons, at 8l. per ton. Another establishment in the arrondissement of Châlons has sold 200 tons, deliverable in the months of September and October, at 5l. 1s. 6d. per ton in warehouse at the works. The rise in iron has thus already had the effect of giving more firmness to the price of pig-iron. There has been no variation in the price of wire at St. Dizier; the sale of chain iron



## NEW INVENTIONS.

PROVISIONAL PROTECTION for six months has been granted for the following during the past week:—  
J. E. DOWSON, Victoria-street, Westminster.—A new application of rolled metal plates to the formation of roadways, bridges, tramways, and other structures. Dated Aug. 6.  
R. THOMSON, New Charlton, Kent.—Improvements in machinery for planing curved, curvilinear, irregular, and other forms in steel, iron, and other metals. Aug. 21.  
G. DAVIES, Lincoln's Inn, London.—Improvements in the manufacture of iron and steel from the cinders and refuse of puddling and other furnaces, and from certain kinds of ores. Aug. 28.  
F. C. P. HOFFMANN, Newgate-street, London.—Improvements in shears for cutting J. Lewis, Manchester.—Certain improvements in machinery or apparatus for preparing and drying clay, and also in machinery to be employed in the manufacture of bricks and tiles. Sept. 2.  
LETTERS PATENT have been issued for the following:—  
W. R. MULLAY, Plymouth.—Improvements in sheathing iron ships, caissons, and other like structures. March 11.  
H. WILSON, Watling-street, City.—Improvements in machinery for shaping wood. J. FULKINGHORNE, Cornwall.—Improvements in treating tin ores, and in apparatus for treating ores and matters containing arsenic. March 12.  
LIST OF SPECIFICATIONS published during the week ending September 5:—  
Steam hammer, &c., 1s. 4d.; machinery for punching and cutting metals, 1s.; anvils, &c., 6d.  
Published by L. DE FONTAINEBOREAU, Patent Agent.

## THE FATE OF AN INVENTOR.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The following letter has been addressed to the *Times*: The authorship is generally attributed to Dr. Percy, if so, the writer has not done that justice to his subject which might have been fairly anticipated from such an authority. The Journal of last week afforded the materials for a more complete appeal than that now made—for a more just statement of the claims of the children of poor old Mr. Rogers to the generous sympathy of the iron trade and general public. However, as the supposed writer is a wealthy man, has many friends in a similarly fortunate position, and as his appeal through such a medium may likewise be read by many able to render the required aid, let us hope that the response may make up for the shortcomings of "Y."

A few days ago a death occurred in an obscure street in Newport, Monmouthshire, which may not have been hitherto chronicled in the *Times*. I allude to that of Mr. Samuel Baldwin Rogers, formerly of Nant-y-Glo. His age exceeded 90 years, and although, by an improvement relating to the manufacture of iron, he largely contributed to the wealth of others, yet he died in the deepest poverty himself. He expressed an earnest wish that he might be buried in a pauper's grave, and his brother Freeman has responded to that wish. And now, Sir, let me tell his story. He was formerly employed at large ironworks in South Wales, and committed the indiscretion of publishing "An Elementary Treatise on Iron Metallurgy." He was dismissed from his situation. The improvement which he introduced was that of iron bottoms for puddling furnaces, and it is one of great practical, and I might almost add, national importance. It was never patented, nor did he, I believe, ever receive for it any substantial reward. It is true that iron bottoms for certain furnaces had been previously suggested; but to Rogers is unquestionably due the merit of having first rendered their application practicable for puddling furnaces. When he proposed them he was laughed at by some iron masters of experience, and yet they are now universally adopted. Measured by its results, the invention of iron bottoms is a great one. When the distressed condition of the poor old man became known—a condition not resulting from misconduct on his part—several persons connected with the iron trade assisted him with money; but assistance came too late. An imbecile daughter survives, and efforts are now being made in South Wales to save her from the workhouse. You will, Sir, I think agree with me that this is a sad story, worthy of being recorded. It furnishes another instance of the unhappy fate of inventors, who in enriching others have impoverished themselves. In the annals of the iron trade there are too many instances of a similar kind.—Y."

DEED OF ARRANGEMENT.—The action Spitzer v. Chaffin, in the Common Pleas, was on two bills of exchange. The defendant pleaded that he conveyed, by deed of arrangement, his free and personal estate, except the necessary wearing apparel of himself and family, and certain leasehold property which he stated was held at a rack rent, and was of no value, to trustees upon trust to pay all costs incurred, and apply the residue to the use of his creditors, and that he was thereby released from their claims. This plea (on demurrer) held good. The Lord Chief Justice said:—"Our judgment must turn upon the point whether this deed has complied with all the regulations of section 224 of the Bankruptcy Act, 1849. Looking at the words of the section and of the decisions upon it, I think that the intention of the Legislature was that parties should not be compelled to go through the Bankruptcy Court, provided they made over all their available assets for all their creditors equally. One of the objections to the deed is that the defendant has excepted from the deed the necessary wearing apparel of himself and his family. Now, the instructions given to the Messenger in Bankruptcy are to seize all a bankrupt's property, except his necessary wearing apparel, and I could hardly believe that the Legislature, in an age of humanity and civilisation, would direct that a deed of this kind should be void unless it provided that an insolvent should be stripped of the clothing necessary to protect him from the cold."

## WEATHER PREDICTIONS.

SIR.—The weather for the coming week, after the winds about the 19th and 20th, will only be a little variable, with a few occasional showers.  
26, Throgmorton-street, Sept. 18. GEORGE SHEPHERD, C.E.,  
Author of the "Climate of England."

## Royal School of Mines.

## ROYAL SCHOOL OF MINES.

DIRECTOR.  
Sir RODERICK IMPEY MURCHISON, K.C.B., F.R.S., &c.  
During the session 1863-64, which will commence on the 5th of October, the following COURSES OF LECTURES AND PRACTICAL DEMONSTRATIONS will be given:—  
1.—CHEMISTRY ..... By A. W. HOFMANN, LL.D., F.R.S., &c.  
2.—METALLURGY ..... By JOHN PERCY, M.A., F.R.S.  
3.—NATURAL HISTORY ..... By T. H. HUXLEY, F.R.S.  
4.—MINERALOGY ..... By WASHINGTON W. SMITH, M.A., F.R.S.  
5.—MINING ..... By ROBERT WILLIS, M.A., F.R.S.  
6.—GEOLOGY ..... By JOHN TYNDALL, F.R.S.  
7.—APPLIED MECHANICS ..... By Rev. J. HAYTHORNE EDGAR, M.A.  
8.—PHYSICS ..... By Rev. J. HAYTHORNE EDGAR, M.A.  
Instruction in Mechanical Drawing, by Rev. J. HAYTHORNE EDGAR, M.A.  
The fee for students desirous of becoming associates is £30 in one sum, on entrance or two annual payments of £20, exclusive of the laboratories.  
Pupils are received in the Royal College of Chemistry (the laboratory of the School), under the direction of Dr. Hofmann, and in the Metallurgical Laboratory, under the direction of Dr. Percy.  
Tickets to separate courses of lectures are issued at £3 and £4 each.  
Officers in the Queen's service, Her Majesty's consuls, acting mining agents and managers, may obtain tickets at reduced prices.  
Certificated schoolmasters, pupil teachers, and others engaged in education are also admitted to the lectures at reduced fees.  
His Royal Highness the Prince of Wales has granted two scholarships, and several others have also been established.  
For a prospectus and information, apply at the Museum of Practical Geology, Jernyn-street, London, S.W.  
TRENHAM REEKS, Registrar.

## MINERALOGY—KING'S COLLEGE, LONDON.

Prof. TENNANT, F.G.S., will commence a COURSE OF LECTURES on MINERALOGY, with a view to facilitate the study of GEOLOGY, and of the APPLICATION OF MINERAL SUBSTANCES in the ARTS. The lectures will begin on Friday, October 2, at Nine o'clock A.M. They will be continued on each succeeding Wednesday and Friday at the same hour. Fee, £2 2s.  
R. W. JELF, D.D., Principal.

MINE INSPECTING.—CAPT. JOSEPH WEBB, of REDRUTH, continues to INSPECT and REPORT on MINES and MINERAL PROPERTY. His long experience enables him to form correct opinions of their prospects and intrinsic values. Samples taken from all the workings, and the real value ascertained.—August 14, 1863.

TO MINERS.—TO BE LET, BY TENDER, THE DRIVING OF A LEVEL OF ABOUT SEVENTY FATHOMS, on a 5 ft. silver-lead lode, at the CORBET DREYNE MINE, ABERDOVEY. Water free, and ample rubbish room close at hand. Tenders to be sent in before the 1st of October next.—For particulars, apply to Mr. H. JONES, auctioneer, Aberdovey, North Wales.

TO MINING ENGINEERS, COAL AND IRONMASTERS.—The ADVERTISER, of several years' experience in thick and thin coal, and ironstone mines, in South Staffordshire, is at liberty to TREAT with any respectable AGENT. Is well up in dialling, levelling, surveying, working of plans, tracings, &c. If not a vacancy, would fulfil the duties of colliery clerk for a period. First-class references.—Address, "Ara," Post-office, Wolverhampton.

TO MINE AGENTS.—A BLACK LEAD of very SUPERIOR QUALITY, for MINING and OTHER MACHINERY, perfectly free from grit, at 16s. per cwt., delivered at any railway station. A trial sample forwarded free on application.—Apply to JOHN JAMES and SON, Dragon Wharf, Truro.

TO PROMOTERS OF PUBLIC COMPANIES, SOLICITORS, AND OTHERS.—WANTED, THE ASSISTANCE OF A SUITABLE PARTY, TO FORM A LIMITED LIABILITY COMPANY, TO WORK A VALUABLE COPPER MINE in MERIONETHSHIRE, NORTH WALES. Or the property would be sold on reasonable terms.—Apply to Mr. FRITCHARD, Mining Journal office, 26, Fleet-street, London, E.C.

FOR SALE, SIXTY TONS OF ROUND IRON BARS, 18 lbs. to the yard, suitable for rails in quarries or mines, and other purposes.—Apply to "H. E. S.," care of Mr. Bradshaw, 34, Jernyn-street, London.

FOR SALE, an excellent 30 in. cylinder PUMPING ENGINE, 9 ft. stroke, equal beam.—Apply to Mr. HOLLOW, Lelant, Cornwall.

## NEWCASTLE MEETING OF THE BRITISH ASSOCIATION.

The most COMPLETE REPORT of the PROCEEDINGS of the BRITISH ASSOCIATION at Newcastle appeared in the "NEWCASTLE DAILY CHRONICLE." Copies of the papers containing the reports have been bound together in an illustrated wrapper, and constitute the most elaborate report of any annual meeting of the Association ever published. Price 3s., by post 3s. 6d.

Orders received at the "Chronicle" office, Newcastle-upon-Tyne.  
London Agents: Messrs. Farrar and Dunbar, 47, Booksellers'-row, W.C.

PERRAN ST. GEORGE MINE, PERRANZABULOE, CORNWALL.—As the accounts of this mine are about to be finally closed, ALL PERSONS HAVING ANY CLAIM against the company MUST SEND IN PARTICULARS before the 31st OCTOBER NEXT, to the FURNER, Mining Office, Langley-street, Newport, Isle of Wight.

PARTNERSHIP.—A GENTLEMAN, who possesses an EXTENSIVE CONNECTION for the PURCHASE and SALE of MINING SHARES, would be happy to MEET with a PARTNER to commence this business with him, confining their business to brokerage only and the management of mines. Capital required, £1000, a great portion of which might remain at the bankers. A very large income would be annually derived.—Address, "K. Y.," Messrs. Austin and Fisher, stationers, 13, Moorgate-street, London.

METAL TUBES AND CYLINDERS.—THE ADVERTISER has COMPLETED AN IMPROVEMENT in MACHINERY for MANUFACTURE of SAME, which is protected at home and abroad. He is now DESIROUS of JOINING with a CAPITALIST to FURTHER the UNDERTAKING, which promises to be a valuable one. A machine is ready for view.—Apply to JNO. KENDRICK, 20, Easy-row, Birmingham.

MERRYFIELD MINING COMPANY (LIMITED).—RESIDENT MANAGER or CAPTAIN WANTED, to SUPERINTEND the workings at the company's LEAD MINES, near FATELEY BRIDGE, YORKSHIRE.—Applications, in writing only, stating experience, last employment, salary required, and accompanied by testimonials, to be sent on or before the 30th inst., addressed to the SECRETARY of the company, 12, South Parade, Leeds.

MINING CAPTAIN WANTED at TYDDINGWADIS SILVER-LEAD MINE, near DOLGELLY. He will be required to understand machinery, lead dressing, &c. Applications to be made to me, stating qualifications, expected remuneration, &c. HUGH FLEMING, Sec., 4, York Chambers, King-street, Manchester, September 15, 1863.

COLLIERY MANAGER WANTED, TO TAKE the MANAGEMENT of a small COLLIERY in the SOUTH WALES DISTRICT.—Apply, with particulars as to qualification and salary required, to "W. Q.," Mining Journal office, 26, Fleet-street, London, E.C.

HEMATITE IRON ORE MINE.—WANTED, A MANAGER at a HEMATITE MINE in WALES, fully competent to take charge of the working and general management.—Applications to be made by letter, addressed to "B. A. C.," Charles Barker and Sons, 8, Birch-lane, London, E.C.

AN ENGINEER of considerable experience is DESIROUS of OBTAINING an APPOINTMENT as RESIDENT VIEWER to ONE or SEVERAL COLLIERIES.—Communications to be addressed "A. B.," 18, Walgrave, Sheffield.

WANTED, by an established firm, a FIRST-CLASS COPPER and BLASTING POWDER AGENCY for the NORTH OF ENGLAND.—Address, "Z.," Post-office, Middlesbrough-on-Tees.

SUPERINTENDENT of GRANITE QUARRIES WANTED IMMEDIATELY, on the DEVONSHIRE COAST. He must be a person of unobdurate skill and experience, capable of opening the quarries in the most judicious way, and having a knowledge of all branches of granite masonry.—Apply to Mr. F. COSTELLO, 17, Old Broad-street, E.C., London, with references and particulars of terms required.

QUARRY INSPECTION.—A PRACTICAL QUARRYMAN, who is well acquainted with all the quarries in North Wales, as well as several in Devonshire and Cornwall, OFFERS HIS SERVICES to INSPECT SLATE QUARRIES, and to furnish truthful reports thereon. Highly respectable references given if required.—Address, "Quarryman," Mining Journal office, 26, Fleet-street, London.

SLATE QUARRY.—TO CAPITALISTS, SOLICITORS, BROKERS, AND OTHERS.—THE ADVERTISER is DESIROUS of DISPOSING of, on advantageous terms, a VALUABLE SLATE QUARRY in CARNARVONSHIRE. Or would be happy to treat with a respectable party to form a limited liability company to work the same.—Address, WILLIAM MORRIS, Esq., Mining Journal office, 26, Fleet-street, London, E.C.

SLATE QUARRY.—THE LESSEES of very VALUABLE SLATE ROCK PROPERTY in MERIONETHSHIRE, within three miles of a shipping port, are PREPARED to DISPOSE of the WHOLE or PART of THEIR INTEREST in the same. There are TWO BEDS of SLATE ROCK, one of a beautiful GREEN and the other a BLUE colour. There is every facility for opening extensive quarries. Terms very easy.—Address, Mr. MORRIS ROBERTS, Glanmorfa Slate Works, Carnarvon.

NEATH AND PELENA COLLIERY COMPANY (LIMITED).—Notice is hereby given, that the share certificates can be had in exchange from the bankers' receipts, upon application at the offices of the company.  
By order, J. NIGHTINGALE, Sec.  
Offices, 150, Leadenhall-street, London.

THE WICKLOW COPPER MINE COMPANY.—THE FIRST ORDINARY GENERAL MEETING of the shareholders of the above company will be HELD at their offices, 43, Dame-street, Dublin, on THURSDAY, the 1st of October next, at Twelve o'clock noon, for the purpose of electing directors and auditors, fixing their and secretary's remuneration, and for other purposes, in pursuance of the Act of Parliament.  
By order, HENRY A. CRUISE, Sec.—September 16, 1863.

LINARES LEAD MINING COMPANY.—Notice is hereby given, that in conformity with the Deed of Settlement, the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office, on THURSDAY, the 24th inst., at One o'clock P.M., to receive the accounts, balance-sheet, and reports of directors and auditors, for the half-year ending 30th of June last, and for the general purposes, as authorised by the Deed of Settlement.  
After the general business has been transacted, this meeting will be made special, when it will be proposed "That this company be registered under the Limited Liability Act."  
By order of the Board, J. B. COLOGAN, Sec.  
5, Queen-street-place, Upper Thames-street, London, E.C., Sept. 10, 1863.

MR. BRENTON SYMONS, M.E., WILL BE IN CORNWALL UNTIL the 30th of SEPTEMBER. Letters previous to that date should be addressed to his offices, at Truro.—18, Hatton-garden, August 22, 1863.

JAMES H. COCK, MINE SHAREBROKER AND DEALER, REDRUTH, CORNWALL. J. H. Cock, having had 10 years' experience in the mining market, and being thoroughly acquainted with mines and their management, is in a position to advise or do business on the most advantageous terms. Cash or time bargains promptly attended to.

MANCHESTER. MR. W. HANNAM, MINING, SLATE QUARRYING, AND GENERAL SHAREBROKER. ROYAL INSURANCE BUILDINGS, KING STREET, MANCHESTER. SHARES BOUGHT and SOLD at current market prices, on usual commission. Reliable advice and information given on all investments. A Monthly Circular, recommending first-class dividend and progressive mines, also shares in two or three "oint" stock companies of undoubted value, may be had on application.

INVESTMENT.—MR. THOMAS SPARGO, STOCK, SHARE, and MINING BROKER, Nos. 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., publishes, every Wednesday, a GUIDE to BRITISH and FOREIGN MINING, and OTHER INVESTMENTS, which should be consulted by all capitalists. Post free on receipt of six stamps.

MR. J. MANSFIELD SMITH, of 38, THREADNEEDLE STREET, E.C., would CALL SPECIAL ATTENTION to the CAMBORNE, ILLOGAN, GWENAP, and REDRUTH DISTRICTS, as the only ones in which mining, energetically conducted, under the management of trustworthy and experienced agents, is certain of success.

J. MANSFIELD SMITH'S JOINT-STOCK COMPANIES SHARE PRICE LIST AND MINING CIRCULAR (sent post free on application) should be consulted by all persons desiring information on mining and other companies. It contains REPORTS on MINES, extracts of PROCEEDINGS of MEETINGS, abstracts of PROSPECTUSES of the principal NEW COMPANIES brought before the public, and a LIST of DIVIDEND and PROGRESSIVE UNDERTAKINGS strongly recommended for purchase. The next number will contain special reports upon several mines in the above-named districts.

J. MANSFIELD SMITH most strongly recommends the purchase of TINCROFT, SETON, WEST SETON, WHEAL HARTLEY, ROSEKAR, CROFT, NORTH DOLGOATH, and CAMBORNE Vean shares, at present prices.  
Telegraphic orders to buy or sell shares punctually attended to.  
Commission, 1 1/4 per cent.

MR. GEORGE SHEPHERD, CIVIL, MINING, AND CONSULTING ENGINEER. Letters addressed 26, Throgmorton-street, London, E.C.

THE NEW CONCORD SILVER, LEAD, AND COPPER MINING COMPANY (LIMITED). Incorporated under the Companies Act, 1862. Capital £30,000, in 10,000 shares of £3 each. Deposit on application 10s. per share, and payment on allotment £1.  
BANKERS.—The City Bank, Threadneedle-street.  
BROKER.—Alfred Bingham, Esq., 1, Coptall Chambers, E.C.  
SECRETARY.—Mr. H. Brook.  
OFFICES.—11, TOKENHOUSE YARD, LOTHBURY, E.C.

ABRIDGED PROSPECTUS. This company proposes to purchase the freehold estate of Wonwood, near Tavistock, Devon, consisting of 100 acres, and including the valuable lead and copper mine known as Wheal Concord.  
This mine was worked many years ago, and £34,000 worth of lead ore obtained from shallow levels, when it was stopped in consequence of litigation between the company and the freeholder. It is now being worked on a small scale very successfully. A provisional contract has been made for the purchase of the entire freehold, with all its mines, and the plant of the mine, for £16,000, of which the vendors receive £7000 in paid-up shares.

Samples of the ore can be seen at the office, 11, Tokenhouse-yard, and prospectuses, and forms of application for shares, with the surveyors' reports, may be obtained also of the bankers and broker of the company.  
Should no allotment of shares be made, all deposits will be returned.

maintains itself well. The water-courses have been sufficiently supplied in the district, and all the establishments have been enabled to actively resume operations. The stocks of coal are exhausted, and arrivals from the North are suspended in consequence of want of water in the canals; orders have been referred to Prussia. The company formed for the construction of a line of railway from Arras to Etaples has concluded with the Wendel works a contract for about 15,000 tons of rails. The works of the Moselle have also, it is understood, obtained the deliveries of rails required for extensions of the Northern and Eastern of France systems; work is consequently abundant, and some establishments will probably find it necessary to extend their means of production. The Cressat and Hayange works have also obtained orders for railway materials, but on terms showing that an intense competition prevails with regard to the supply of this description of fixed plant.

There has been no change in the tone of the Paris copper market. English being quoted 967, Lake Superior 1081, and rough Chilean 897 per ton. During the past month affairs in United States copper have been almost nil at Havre, the deliveries having been confined to 5 1/2 tons against 2 1/2 tons arrived; the stock on Sept. 1 was 257 1/2 tons, of which 116 tons are Minnesota mark. Some transactions have taken place in Chilean on consumptive account, and 172 tons have changed hands on speculation at 897, at which price there remained sellers; the stock is composed at present of 1167 tons. There have been few transactions in minerals, of which the market is now destitute. In old copper the total sales in August were 31 tons, which were run off at 371 to 385, 4s. per ton for red, and 501, to 510, 4s. per ton for yellow. On the Dutch market the copper of the Society of Commerce is maintained at 50 1/2 s. to 51 s. At Berlin and Cologne affairs have been quiet; holders of good marks maintain, nevertheless, their pretensions, and have supported the rates previously reported. Copper remains in favour at Hamburg; good descriptions are especially in demand, but stocks are exhausted, and the quantity of Lake Superior which remained available has been re-forwarded to the United States. Banca tin has remained quiet, and without any demand at Amsterdam and Rotterdam; it is held by continuation at 74 s. The market is inactive, and prices have been feeble at Batavia, Banca having been quoted 1317, 1320, and 1325, and English, 1161. The sales of a month of August have been insignificant at Havre; 200 ingots of brilliant Detroit changed hands at 127 1/2, and 200 other ingots at 123, per ton; Banca tin wanted on the spot. Hamburg has remained without change, and no great amount of business has been done. At Cologne and Berlin the article has not been much sought after. The calm in lead continues; at present the article is only in moderate demand on consumptive account. Rough French has been quoted 211. 16s. per ton at Paris. Berlin has been tolerably firm. The demand has not been very active at Hamburg, but previous prices have been maintained. An adjudication for 300 tons of lead in saumons will take place at Liege on Sept. 23, for the artillery service at Antwerp. Zinc sustains itself in the favourable position which it has occupied of late. Rough Silesian has risen at Paris, and has been firmly held at 207, per ton. At Breslau holders maintain their prices firmly. Numerous transactions have been concluded at Hamburg, and the secondary markets have participated in the general upward movement.

## LITERARY NOTICE.

Railways in the East, and generally in High Thermometrical Regions. (In two vols.) By W. DAVES HASKELL, late one of the resident engineers of the Smyrna and Aidin Railway, author of "Railway Construction," &c. London: Atchley and Co., 106, Great Russell-street, Bedford-square.

The purpose of this book is, according to the author's own language, "to analyse the conditions under which the construction of railways, the management of works, and the development of such undertakings, have to be carried on in the East, and in the only partially inhabited districts of those regions; also the conditions of men, their habits and capabilities, and of a multitude of other circumstances." He "wishes to submit to engineers and others, whose labours have not led them so far from home" (as he himself has been, we presume the meaning to be) "some few practical observations, which he has made during the performance of his professional duties, and which, merely relying on the value fairly attributable to the experience of every man, he hopes and ventures to believe may be of some slight use to all who are interested in these undertakings, either by the anxious duty of supervision, or through their having made investments in such enterprises, the uncertainty of which must naturally cause some anxiety." The author does not bring before us the subject of his work in very clear and intelligible language, although this may, doubtless, be attributed to a certain degree of modesty, which is, to some extent, characteristic of the manner in which the man of hard, unyielding, inelastic facts and experiences, gives one an introduction to the surprising results of accumulative and arduous practice. One of the volumes of the book is exclusively letter-press, and the other is almost exclusively drawings, this latter containing "91 plates of executed constructions." These plates are, indeed, valuable to the railway engineer; they are detailed drawings, and may be worked from with facility. Now, this is an exceedingly useful book to all railway engineers, as it is, without a doubt, the truthful experience of a very closely observing and truly practical member of the profession. Could the engineer—especially the young one—but know thoroughly the opinions and experimental knowledge of all who have preceded him in the paths of engineering art and science, he would, as a matter of course, be in the very best possible position for applying his own ingenuity to the maximum advantage. Every work, therefore, which brings before one the facts and experiments which have arisen out of a life of practice in any art must be of value, only there is certainly a great difference in the excellencies of the way in which such information is put together and published; in this case we can say everything for the publishers, as they certainly have done their work in a masterly style; and for the author, we can say that he has given, in the descriptive and statistical part of the work, and in the drawings, a vast amount of information which the practical engineer will be at once enabled to understand and appreciate. We should advise every railway engineer to add this book to their library; and to all directors, contractors, and shareholders in railways, especially those railways situated between the tropics, the work must be of great interest and service. A notion of the contents of the book may be gathered from the following summary of its contents:—The Introduction; Observations with regard to Labourers and Artizans; Necessity for speedy commencement of Works in the Interior; Specification of Conditions relative to the Construction and Concession of Railways in Turkey; Articles of Agreement for the Concession of the Railway from Smyrna to Aidin, in Asia Minor; General Features in a form of Contract for a line of Railway, undertaken abroad, and Specification of Work; Rain-falls, Streams, Torrents, &c.; Bridges; Earthworks and Permanent Way; Stations; Roads and Tramways; Wrought-iron Bridges; Docks and Jetties—their Construction, &c. We unhesitatingly recommend the work to everyone interested in railway works abroad, and we venture to express our opinion that on many essential particulars Mr. Haskell may be taken as a safe guide.

REVIVAL OF THE SCIENTIFIC DISCOVERIES OF THE ANCIENTS.—We understand that the Law Officers have fixed Tuesday next for the re-hearing of the opposition to the sealing of the patent for the Polytechnic ghost. The patent was opposed on the notice to proceed, but the re-hearing has been granted upon the application of Mr. Dircks. That Prof. Pepper is entitled to great credit for having produced the effect of the Polytechnic cannot be questioned, but there is little hope of those interested in the proposed patent being able to recover royalty from others who have used it, inasmuch as the mode of producing the effect is described almost in the same words as Mr. Dircks used in his paper read before the British Association, and reported in the *Mining Journal* of Oct. 2, 1858, in the work entitled "Natural Magic," by John Baptista Porta, a Neapolitan, in 20 books, wherein are set forth all the riches and delights of the Natural Sciences. London: Printed for Thomas Young and Samuel Seale, and are to be sold at the Three Pigeons and at the Angel in St. Paul's Churchyard, 1658. The description, from Porta, an earlier edition of whose work was published about 1581, was quoted in "Magia Universalis Naturæ et Artium," &c. by P. Gasparis Schotti, regiscurianæ societatis Jesu, which was published at Frankfurt in 1657. From Mr. Dircks' researches in collecting the information for his "Perpetuum Mobile," he must have become quite familiar with the works both of Porta and Schotti, which would account for the similarity of the descriptions. The case is one to which great importance will attach, from its bearing upon the question of the validity of old inventions re-patented, and in our next we shall give the result of the Law Officers' decision. According to the general opinion, the publications in the *Mining Journal* and elsewhere in 1858 would be quite sufficient to render any patent taken subsequently for the same discovery invalid.

MINE ACCIDENT.—At South Tolgus Mine, Wm. Weerne was drowned in a 12 ft. level winze by an influx of water from an old shaft in Teldy. Verdict, "Accidental Death."

At the DRENNEMANE BARTIES MINE a serious casualty occurred on Saturday. This mine, which is situated on the property of Lord Radnor, was worked some years since by a London proprietary to a depth of about 20 fathoms, and then abandoned. It was again opened by some English gentlemen early in the past year, and some idea may be formed of the extent of the deposit of this mineral, when we state that nearly 1000 tons have been raised and shipped since the month of May last. There have been, however, we are informed, startling indications for some time past of the insecure state of the workings, thus necessitating the employment of the heaviest balk timber to replace the green wood that had been temporarily used, and little calculated to sustain the enormous pressure of a singularly loose and friable stratification. The new timber was already cut and prepared for lowering into the mine, when suddenly the sides of the levels gave way, and the whole caved in, which has gone on extending until an enormous chasm is now formed of many fathoms in depth from the surface, rendering the road impassable for a considerable space—not unlike what we may suppose to be the appearance after the visitation of an earthquake. Fortunately, there was only one man at work in the bottom of the mine, who was unconscious of danger until his attention was arrested by the man at surface. The latter was first aroused by the noise of timber suddenly cracking, and the simultaneous fall of ground in the upper level. His companion had barely time to spring into the kibble, where he was raised with all speed to the surface unhurt and the lower level safe. It is supposed that the event has been accelerated by the late heavy rains. The situation of the mine presents a natural outlet for the drainage of the Drennemane Mountain, and a considerable volume of water thus found its way through the fissures formed between the soft clay-slates after a very dry summer. It is to be regretted that a heavy loss will, by this accident, be entailed, not only on the worthy proprietors, but also to the miners, who are for the present thrown out of employment.—*West Country Eagle*, Sept. 12.



## COPPER MINES IN SANTO DOMINGO.

At a MEETING of mining engineers, private investors, and others interested in establishing THE PLATANO MINING COMPANY (LIMITED), held on Wednesday, the 26th August, 1863, at the offices of the company, 36, Cannon-street, London, E.C., the documents hereafter mentioned having been read and discussed, and other information elicited, the following resolutions were passed unanimously:—

Proposed by Capt. SAMSON VIVIAN, seconded by ADAM MURRAY, Esq., Mining Engineer:—  
That the reports of Colonel T. S. Hencken, of St. Domingo, and of Messrs. John Pooley and Thomas Husband, mining captains, of Cornwall, employed by him on the copper lodes, &c., of El Platanito, are very satisfactorily verified by the reports of Professor Ansted and of Don Manuel Fernandez de Castro, Inspector-General of the Cuba Mines, commissioned to report on the mineral resources of St. Domingo by the Spanish Government.

Proposed by EVAN HOPKINS, Esq., Mining Engineer, seconded by SWINBORNE J. BOND, Esq.:—  
That the identification by Mr. Thomas Husband of the ore in its natural condition, exhibited to this meeting as samples of the produce from the eight copper lodes and their feeders at El Platanito, and as being precisely conformable with the ores thence conveyed to Messrs. Richardson, of Swansea, and the detailed information given by him of the character, progress, and prospects of the mines, should be accepted as conclusive evidence of the great local advantages, essential condition, and highly profitable nature of the undertaking.

Proposed by HENRY NESBITT, Esq., seconded by W. H. MACKRETH, Esq.:—  
That the prospects for the formation of a company to purchase the freehold estate of El Platanito and realise its mineral wealth, founded on the preceding resolutions, and now submitted to this meeting, is deserving of private encouragement and public confidence and support.

Copies of prospectuses, maps, reports, &c., may be obtained on application by letter, or personally, from Mr. LEE STEVENS, 36, Cannon-street, London, E.C.

## WEST WHEEL KITTIE MINING COMPANY.

At a MEETING of the promoters and adventurers of West Wheel Kitten, held at Frances's Hotel, St. Agnes, on Thursday, the 10th day of September, 1863, Dr. HENRY WHITWORTH in the chair.

The reports respecting the mine, of Captains Joseph Vivian, William Teague, John Evans, and Nicholas Dunstan, having been read, the following resolutions were adopted:—

Proposed by Mr. WILLIAM C. VIVIAN, and seconded by Mr. ALMOND E. PAUL:—  
That the mine to be called West Wheel Kitten, in the parish of St. Agnes (hitherto known and prosecuted by the late adventurers under the name of Wheel Rock), bounded on the north by Wheel Friendly and Polbreen Consoles, on the west and south by Polbreen, and on the east by Wheel Kitten, be prosecuted and carried on under and by virtue of the several sets granted by the Right Hon. Viscount Falmouth, Richard Stephens, Esq., and others, for the several terms of 21 years respectively, in the said sets mentioned.

Proposed by Capt. WILLIAM TEAGUE, and seconded by Mr. ALFRED TEDDER:—  
That the sum of £571. 8s. 4d. be paid to Messrs. Vivian, Dunstan, and Paul, for the several sets now comprising West Wheel Kitten, such sum to include all the expenditure to the present date in the working of the mine, amounting to £271. 8s. 4d., as shown by the cost-book and vouchers produced and examined this day, and all other expenses attending the procuring of the sets, &c.; the adventurers to have all the tin raised during the past working of the said parties, amounting to about 2½ tons.

Proposed by Capt. JOSEPH VIVIAN, and seconded by Mr. JOHN ESKINKE:—  
That the mine shall be worked on the Cost-book System, and shall be divided into 5000 shares.

Proposed by Dr. WHITWORTH, and seconded by Mr. JOSEPH DUNSTAN:—  
That Captain Joseph Vivian be the manager of the mine, at a salary of four guineas per month.

Proposed by Mr. DUNSTAN, and seconded by Mr. WILLIAM C. VIVIAN:—  
That Mr. Almond E. Paul be the purser of the mine, at a salary of four guineas per month.

Proposed by Mr. PAUL, and seconded by CHAS. T. FARLEY:—  
That Dr. Whitworth be the surveyor of the mine.

Proposed by Mr. WM. VIVIAN, and seconded by Mr. JOE:—  
That Messrs. Wm. Matthews and Wm. Bennetts be the joint engineers of the mine.

Proposed by Mr. DUNSTAN, and seconded by Mr. CHAS. T. FARLEY:—  
That Messrs. Williams and Co. be the bankers of the mine.

Proposed by Dr. WHITWORTH, and seconded by Capt. JOSEPH VIVIAN:—  
That for the payment of the above sum of £571. 8s. 4d., and for the carrying on the operations of the mine, a call of 5s. per (5000th) share be made, and payable forthwith, either to the purser or bankers of the company.

Proposed by Capt. JOSEPH VIVIAN, and seconded by Mr. FARLEY:—  
That the meetings of the adventurers be held every three months.

Proposed by Mr. WM. C. VIVIAN, and seconded by Mr. PAUL:—  
That the reports of Capt. Vivian, Teague, Dunstan, and Evans, be printed with the resolutions passed to-day, and circulated amongst the shareholders.

Proposed by Mr. WM. C. VIVIAN, and seconded by Capt. TEAGUE:—  
That a suitable steam-engine be purchased and erected forthwith, in accordance with the recommendation of Capt. Vivian.

Proposed by Mr. JOSEPH DUNSTAN, and seconded by Capt. VIVIAN:—  
That the best thanks of the meeting be given to Dr. Whitworth, for his able and courteous conduct in the chair.

Camborne, July 25, 1863.—Wheel Rock Mine is situated in the parish of St. Agnes, and is three-quarters of a mile in length from east to west on the run of the lodes, by about a quarter of a mile in width. It is bounded on the east by Wheel Kitten; on the north by the Polbreen Consoles and Friendly Mines; on the south and west by Polbreen Mine. It has the principal lodes on which Wheel Kitten adventurers are working traversing the whole extent of the set, with every indication at surface of being as productive in minerals as this mine. The ground has been worked by old miners to the adit level, with the appearance of its having been profitably done; and also below it to the extent of at least 20 to 30 fms., it having been drained by horse-power, and the mineral tanning away at tribute. To work this mine effectively requires that a moderate sized steam pumping-engine should be erected to develop the ground; and as tribute ground is at present being worked below the adit level, and judging from what has been done in the mines to the north and south, and Wheel Kitten to the east, there will be a strong probability of opening up productive and profitable mine, if I may mention that on parallel lodes lying within half-a-mile of the north of the set immense profits have been made, and that Wheel Kitten, on the continuation lodes of Wheel Rock, is now opening up a good dividend mine.

Tincroft Mines, Redruth, Aug. 17, 1863.—I have gone over the set of Wheel Rock situated in St. Agnes. The mine is in a good locality, and surrounded by, and abutting on, the best mines in the St. Agnes district, having on the east Wheel Kitten, which is fast approaching a dividend state, and a very promising mine indeed; and on the west Polbreen Consoles, which has made large returns for tin, with good profits to the present parties; as also Polbreen, which I am told has entered the Dividend List, and it is said that it is looking remarkably well for tin. The lodes wrought on in these mines before mentioned would appear to me to pass through the Wheel Rock set, making it a speculation of no ordinary character, and one that I should like to see worked, believing it will prove remunerative.

St. Agnes, Sept. 9, 1863.—It is a very extensive mine set, which extends from Messrs. Vivian's paint-works (near the Quay-road to Beacon-road (near the Beacon-hill)), being above 600 fms. in length on the course of the lodes, and 120 fms. in width; it is a first rate tin district, having Polbreen, Friendly, Wheel Pyre, Wheel Trevaunance, and Wheel Coat Mines on the north; Polbreen and Wheel Friendly Mines on the south and west; and Wheel Kitten on the east, all of which mines have produced large quantities of tin, and the greater part of them immense profits to the adventurers. The lodes in this mine being a continuation of Wheel Kitten lodes, which are now so productive as they extend west in Wheel Kitten, add considerable value to your set. There are two adits driven into this mine—one 30 fms. deep from the surface, the other about 50 fms. deep; the shallow adit is extended several hundred fathoms on the course of the Wheel Kitten lode, and the backs are worked to a considerable extent by tributaries; and also the middle levels between the two adits have been driven on the course of the lode about 150 fms.; the back of this level also has been worked on to a great extent; the deep adit has been driven on the course of the lode about 90 fms., and between all the levels we find extensive workings, and have tributaries now employed in drawing and stamping stuff left in the stalls, which will produce about 12 lbs. of black tin to the ton of stuff, and have no doubt but that considerable quantities of tin and copper must have been raised. There is a cross-cut extended south about 80 fms., which has cut a lode answering to the bearing of Wheel Kitten south lode, and which, no doubt, might be cut in the engine-shaft in sinking about 60 fms. under the adit. We find that the mine has been sunk under the adit about 30 fms., and the reports are very favourable that there is a decided improvement in the mine as it goes in depth, there being a good leader of tin in the last level driven on the lode. We have put in a fine new engine-shaft, cleared and secured different whelm-plate shafts, which will facilitate the further prosecution of the mine. We calculate the tributaries have about 2½ tons of tin to surface.

JOHN EVANS, NICHOLAS DUNSTAN.

## LIVERPOOL AND LONDON FIRE AND LIFE INSURANCE COMPANY.

At the ANNUAL MEETING of the proprietors in this company, held on Thursday, the 25th of February, 1863,

JAMES ASPINALL TOLIN, Esq., in the chair.  
The report of the directors for the year 1862 was read; it showed:—  
That the fire premiums for the year were £458,965 0 0  
Against those in 1861, which were 360,131 0 0

Giving an increase in 1863 of £98,834 0 0  
That the new Life business comprised the issue of 785 Policies, insuring 467,334 0 0  
Of which the annual premium is 13,985 7 11  
That 69 new Annuity Bonds have been granted, securing annual payments of 39,446 17 11  
And that the aggregate of the annuities now payable is 23,684 1 13  
That there has been added to the life reserve the sum of 79,377 11 4  
That the balance of undivided profit was increased by the sum of 25,725 9 7  
That the invested funds of the company amounted to 1,417,808 8 4  
In reference to the very large increase of £76,000 in the fire premiums of the year, it was remarked in the report, "The premiums paid to a company are the measure of that company's business of all kinds, and whence derived; the directors, therefore, prefer that test of progress to any duty collected may afford, as that applies to only a part of a company's business, and a large share of that part may be, and often is, re-insured with other offices. In this view the yearly addition to the fire premiums of the Liverpool and London Company must be very gratifying to the proprietors."

SWINTON BOULT, Secretary to the Company.  
JOHN ATKINS, Resident Secretary, London.

MR. GEORGE HENWOOD, MINING ENGINEER, LOCHHEAD HOUSE, LOCHWINNOCH, SCOTLAND, OFFERS his SERVICES and ADVICE on mines situated in any part of England, Scotland, Wales, Ireland, Isle of Man, &c. Mr. Henwood's extensive experience in his peculiar department of mining science is well known, and will be exerted to the utmost for the benefit of his clients.

TO CAPITALISTS.—MESSRS. LEICESTER AND CO., INSPECTORS AND VALUERS OF MINES, &c., MELBOURNE, VICTORIA, OFFER THEIR SERVICES TO SELECT AND INVEST CAPITAL IN MINING ENTERPRISES, for which they charge 2½ per cent.; and they also COLLECT and TRANSMIT THE DIVIDENDS, charging 2½ per cent. on their amount. Messrs. LEICESTER and Co. earnestly call the attention of capitalists to the many opportunities they possess of investing, to pay from £50 to £150 per cent. per annum. Sums under £50 will be charged extra. All remittances must be made through our agent, Mr. RICHARD MILDENSTON, Mining Journal office, 26, Fleet-street, London; or direct through our bankers, the Union Bank of Australia.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the GREAT NORTH TOLGUS MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 5th day of September instant, presented to the Vice-Warden of the Stannaries by George Williams and Thomasine Marton, creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the office of Winslow Jones, Esq., solicitor, Cathedral-yard, Exeter, on Thursday, the 24th day of Sept. inst., at Half-past Two of the clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavits verifying the same, from the petitioners or their solicitors, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before Tuesday, the 22nd day of Sept. inst., and notice thereof must at the same time be given to the petitioners, their solicitors, or agents.

HODGE, HOCKIN, AND MARRACK, of Truro (Solicitors for the Petitioners).

GREGORY AND CO., 1, Bedford-row, London (Agents of the said Solicitors).

Dated Truro, September 11, 1863.

## RHONDDA VALLEY, GLAMORGANSHIRE.

MR. H. W. HARRIS WILL SELL, BY AUCTION, at the

New Inn, Pont-y-Pridd, on Monday, the 29th day of September, at Three o'clock in the afternoon, subject to such conditions of sale as shall be then produced, all that colliery known as the BULLFA COLLIERY, situate at YSTRADYFODW, in the

VALE OF THE VALE, GLAMORGANSHIRE.

This colliery is near to the Church station on the Rhondda Fawr branch of the Taff Vale Railway, is distant from the shipping port of Cardiff 20 miles, and is in direct communication with the narrow gauge system of the West Midland and other railways. The coal field has an acreage of 432 acres, or thereabouts, and is held under a favourable lease from the Countess of Dunraven, for a term, of which 59 years are unexpired, at a dead rent of £300 per annum, until the 2d of September, 1864, and for the remainder of the term at an increased dead rent of £480, and at the following royalties:—Nos. 1 and 2, Rhondda vein, 6d. per ton (2520 lbs.); No. 3, ditto, 8d. per ton (2520 lbs.).

The vein of coal is now worked by a level opened upon the ground, per has a thickness of coal of 2½ ft. of first-rate quality, is worked at a moderate expense, and lies at an inclination of about 1¼ inch in the yard.

There are blacksmiths' shop, weigh-house, machine, screen, good siding accommodation, and everything necessary for the working of the colliery.

The whole is now in excellent condition for working, and sending away a regular daily output of 100 tons, which as the colliery becomes more developed will be considerably increased.

The horses, trams, and plant of the colliery, according to a list produced at the auction, are to be taken by the purchaser at a valuation.

The colliery is connected with the Taff Vale Railway by an incline or tramroad, and sidings, which have been lately constructed at a great expense by the proprietors of the colliery, and will be sold therewith. The incline or tramroad is held for the residue of a term, of which 59 years are unexpired, at a dead rent of £100 per annum, and a way leave of 1d. per ton of 2520 lbs. of all coal and other articles conveyed thereon.

Arrangements may be made for a portion of the purchase money remaining on mortgage to an approved purchaser.

For further particulars, apply to THOMAS CARR, Esq., on the premises, Ystrad Rhondda; to the auctioneer, 140, High-street, Merthyr; or to H. J. HOLLIER, Esq., solicitor, Old Town Hall, Aberdare.—Auctioneer's Office, September 1, 1863.

## TO CAPITALISTS.

MR. CHARLES BROUGH WILL SELL, BY AUCTION, at the

Queen's Head Hotel, Pilgrim-street, Newcastle-upon-Tyne, on Tuesday, the 29th of September, at One o'clock precisely, ONE SEVENTH SHARE OF THE

SEATON DELVAL COLLIERY, in the county of NORTHUMBRIA.

This colliery is situated in the very centre of the great coal field of Northumberland, seven miles from the Northumberland Dock, on the River Tyne, and about two miles from the port of Blyth, with both of which shipping places it is connected by railway. The celebrated steam coal, known as "Hastings's Hartley" is the produce of Seaton Delval Colliery, and the present vend is about 90,000 chaldrons per annum.

Further particulars may be obtained of Mr. T. G. HUNTER, Backworth Colliery, Newcastle-upon-Tyne.

## BACKWELL PARK FARM, BACKWELL, SOMERSETSHIRE.

VALUABLE FREEHOLD ESTATE, with the rich seams of COAL, IRONSTONE, and OTHER MINERALS under it.

MESSRS. FARGUS WILL SELL BY AUCTION, at their sale rooms, No. 4, Clare-street, Bristol, on Thursday, October 8, 1863, at One for Two o'clock precisely, One Lot, as may be agreed upon, all that most DESIRABLE and COMFORTABLE FREEHOLD ESTATE, called BACKWELL PARK FARM, situate at BACKWELL, in the county of SOMERSET, about seven miles from Bristol, comprising:—

A substantial FARM-HOUSE, with barns, barton, stabling, and other agricultural buildings; and 128 A. 2 R. 1 P. of fine PASTURE and ARABLE LAND, now in the occupation of Mr. William White, whose tenancy will expire at Michaelmas, 1863; together, also, with the valuable beds of COAL, IRONSTONE, and OTHER MINERALS which lie under the estate and under that part of the Bristol and Exeter Railway by which the property is intersected.

This capital estate, the greater part of which consists of fine old meadow land, is situated in a ring fence, except where intersected by the railway; it is bounded on one side by the road leading from Backwell to Nailsea and Clevedon; the house and about 128 acres lie on the north side of the railway, and about 20 acres on the south side. The whole is freehold, with the exception of a very small strip on the west side of the farm, containing 37 perches, which are held on lease for lives.

The land tax on the estate is £10 2s. 8d. per annum, and the tithe rent charge 10s. per annum.

Particulars and plans of the estate are in preparation, and may shortly be had of Messrs. CLAYTON, COOKSON, and WAINWRIGHT, solicitors, 6, New-square, Lincoln's-inn, London; or of Messrs. FARGUS, 4, Clare-street, Bristol.

## VALENCIA SLATE SLAB QUARRIES, COUNTY KERRY, IRELAND.

MESSRS. FULLER AND HORSEY are instructed to SELL, BY AUCTION, at the Auction Mart, London, on Wednesday, October 28, at Twelve, in One Lot (unless an acceptable offer be previously made by private contract) the

EXTENSIVE QUARRIES and MILLS of the VALENCIA SLATE SLAB COMPANY, situate in the island of Valencia, County Kerry, Ireland. The works have been carried on by the present company for about 14 years, and a very large output has been made in opening the quarries, and in erecting the mills and the requisite machinery.

The quarries are situate on the side of a mountain, about 420 ft. above the sea level, and an opening has been made for working about 120 ft. wide, running into the mountain to about the same depth, uncovering a succession of platforms of slates of various sizes, and has a regular cleavage, and the stone is very much improved by blasting, thus avoiding the large amount of waste occasioned by the latter process. The roof of the quarry is self-sustained, and is perfectly secure.

The quality of the slabs is now well known and appreciated, and are taken in large quantities by the principal merchants in London and elsewhere. They take a beautiful and permanent polish, are particularly valuable for enamelling, and unaffected injuriously by furnace heat, and are raised in larger sizes than from any other quarry. The waste from the slab beds is made into roofing slates, for which there is ample local demand. The present yield is about 3000 tons of slate slabs annually, but by a comparatively small outlay in an extension of the works, this quantity may be doubled, the machinery at the mills being equal to prepare that quantity, and the demand at the present time being in excess of the capabilities of supply.

The mills are situate about 2½ miles from the quarries, are connected by a good road of easy descent, which is kept in repair principally at the expense of the county; but every facility would be afforded by the Knight of Kerry, who is the freeholder, for laying down a tramway by the side of the present road, which would much lessen the cost of transit. The mills are most advantageously placed, being immediately contiguous to the pier, at which vessels of 300 tons burden can load alongside, and there are no pier dues nor wharfage payable. The harbour of Valencia is both safe and commodious, and freights to London are about the same as from the North Wales ports.

The buildings are well arranged, and substantially erected. They are fitted with sawing and planing machinery of the best description, fitted by Blyth, of Limehouse; and there are overhead cranes, tramways, and every appliance for saving manual labour. There are also 10 dwelling houses, manager's residence, and about 35 acres of farm land.

There is a plentiful supply of water for the purposes of the mills from a large open reservoir. The quarries and works are held by lease from the Knight of Kerry on easy terms.

The present company have expended upwards of 40,000l. upon the property. They have succeeded in establishing the reputation of, and a market for, the slabs, and have thoroughly proved the existence and uniform character of the slabs, and the extent to which the workings may be carried; and they have supplied and fitted the most approved modern machinery for the preparation of the slabs for market, and it is confidently believed that the works are now in that state that, in the hands of two or three individuals, very profitable results may be anticipated.

The works may be viewed by cards only, which, with further particulars, may be had of Messrs. PALMER, NETHERFIELD, and ELAND, solicitors, 4, Trafalgar-square, W.C.; at the "Midland Counties Herald" Office, Birmingham; at the Gresham House, St. James's-street, Dublin; at the Railway Hotel, Killarney; at the Adelphi Hotel, Liverpool; at the Mart, London; and of Messrs. FULLER and HORSEY, 13, Billiter-street, London, E.C.

## PETER TAVY, DEVON.

FOR SALE, BY PRIVATE CONTRACT, all that well-watered and DESIRABLE ESTATE, called REARAWALLS, containing 117 acres, or thereabouts, of MEADOW, PASTURE, ARABLE, and other LAND, with DWELLING HOUSE and ample and commodious FARM BUILDINGS thereon, situate near LYDFORD, and in the parish of PETER TAVY, in the county of DEVON, and being about seven miles from Tavistock, eight miles from Okehampton, and adjacent to the excellent turnpike-road between those towns.

The district is a good mineral one, and the estate being contiguous to the celebrated Wheal Friendship and other mines, and known to contain metallic lodes of considerable promise, and having great water advantages, is worthy of the attention of mining adventurers.

The railway from Tavistock to Lanneston, now being rapidly proceeded with, will have a station at Lydford. Mr. JAMES STEPHENS, of Lydford, will show the estate. Apply to Messrs. PAUL and LINTON, solicitors, Plymouth and Redruth.

## TO BE LET, and entered upon at Michaelmas next, the

PREMISES at RHVD-Y-MWYN, near MOLD, FLINTSHIRE, at present occupied by Messrs. Taylor and Co., as an IRON FOUNDRY. These premises are desirably situated, about three miles from Mold, on the River Alyn, in the very heart of the Mold mining district, and possessing an extensive water-power, well calculated for being used as a foundry, as at present, or for the establishment of a manufactory for wagons and other rolling stock.

The Mold and Denbigh Railway, for which an Act of Parliament has already been obtained, will pass within a few yards of the works. The water-wheels at present on the works can be had at a valuation.

Mr. BOWDAGE, Tyddyn-y-Gwynn, will show the premises; and further particulars may be had on applying to Mr. G. M. DIXON, Bucknowle House, Warcham, Dorset.—Bucknowle House, Sept. 29, 1863.

## COUNTY OF LANARK.

UPSET PRICE REDUCED TO £25,000.

## THE DUNDYVAN IRONWORKS, AND OTHER

PROPERTIES, SITUATED NEAR COATBRIDGE, FOR SALE.—There will be exposed to SALE, within the Faculty Hall, Glasgow, on Wednesday, the 30th day of September, 1863, at Two o'clock after noon (unless previously disposed of by private bargain), the DUNDYVAN FIG and BAR IRONWORKS, comprising:—

1.—The FIG IRONWORKS, consisting of EIGHT BLAST FURNACES, with all the usual working conveniences, counting-houses, warehouse, stables, &c.

2.—The BAR IRONWORKS, consisting of FORTY-FOUR PUDDLING FURNACES, with all the usual working conveniences, capable of turning out 350 tons of finished iron weekly, consisting of plates, rails, and bars in great variety.

3.—ONE HUNDRED AND FIFTY-FOUR WORKMEN'S DWELLINGS, known by the names of "Long Row," "English Square," and "Stone Row."

4.—The LANDS OF DYKE, with the FARM BUILDINGS, STEAM ENGINE, THRASHING MILL, RAILWAY, &c., thereon.

The above subjects extend to above 35 acres Imperial, and the minerals therein will be included, in so far as belonging to the expositors, with the machinery, fittings, and fixed plant at Dundyvan Pit.

5.—The MINERALS HELD IN LEASE, consisting of DRUMPELLER, SOUTHERHOUSE, and DALZIEL COAL, and WHIFFLAT and HOLEHILL IRONSTONE, with the whole MACHINERY, FITTINGS, RAILWAYS, and FIXED PLANT of every kind attached thereto.

The purchaser will be entitled to a lease, on favourable terms, of the valuable ironstone in the estate of Arden, extending to 1100 acres, or thereby, and to the option of taking at a valuation the moveable stock and utensils connected with the mines and ironworks; and also the farm leases of Whifflat and Souterhouse farms, including implements and utensils, all as per inventories.

For further particulars, apply to Messrs. AITKEN and MACKENZIE, accountants, Glasgow; Messrs. MACKENZIE and MOORE, mining engineers there; Messrs. MELVILLE and LINDSEAY, W.S., Edinburgh; Messrs. MONCRIEFF, PATTERSON, FORBES, and B. writers, Glasgow; or Messrs. BARNATTY and KIRKWOOD, writers there, the by whom will exhibit the titles and articles of roup.

## MESSRS. W. DERRY AND CO., MINING MATERIAL

MERCHANTS, ST. AUGUSTINE, respectfully inform the mining public that they have constantly ON SALE EVERY DESCRIPTION OF MINING PLANT, in STEAM ENGINES, pitwork, and dressing appliances, which they are prepared to offer on very advantageous terms, and such as will especially commend themselves to the projectors of new undertakings.—Applications to be addressed as above, or to the engineer of the company, Mr. W. H. GRAY, St. Austell.

Dated St. Austell, August 12, 1863.

## WILLIAM MATHEWS, ENGINEER, TAVISTOCK,

has FOR SALE:—ONE 30 in. CORNISH PUMPING ENGINE, with BOILER 9 tons; ONE 14 in. HORIZONTAL WHIM ENGINE and cage, with BOILER 4½ tons; TWO 10 horse PORTABLE ENGINES, for winding or pumping; ONE CORNISH CRUSHER; ONE 30 in. diameter WATER WHEEL, 9 ft. breast, iron axle, sockets and rings; 60 fms. of 3 in. flat-rod, with pulleys.

## ANTHRACITE COLLIERY FOR SALE.—TO BE SOLD, BY

A PRIVATE CONTRACT, A VALUABLE ANTHRACITE COLLIERY IN SOUTH WALES, with the private railway, wharf, and offices thereto belonging, now the property of the Rhos Colliery Company (Limited). The colliery is capable of raising from 100 to 150 tons a day, and has a branch railway connecting the pit with the Llanelly Railway, and has a wharf and offices at Llanelly. For further particulars, apply to JOHN SATYER, Esq., 1, New-square, Lincoln's Inn, London, W.C.

## THE LOWER RESOLVEN COLLIERY TO BE DISPOSED

OF, BY PRIVATE CONTRACT.—The colliery (belonging to Messrs. Thomas) adjoins the Vale of Neath Railway, near the foot of the station, and is within 12½ miles of the port of Swansea. The property leased comprises an area of about 605 acres, for a long term of years, on reasonable terms, containing the seams of coal of the district, and is opened by a drift on the Resolven vein, so well known on the Government list as a first-class steam coal. It is also well suited for locomotive purposes. Purchase money, including plant, moderate.—Further particulars, with full information, may be obtained from Mr. T. MACDONOUGH SMITH, 1, Chapel-place, Duke-street, Westminster.

## FOR SALE, BY PRIVATE CONTRACT, THE CWM BACH

COLLIERY, situated about two miles from the town of Swansea, in the county of Glamorgan, and within 70 yards of the South Wales Railway, having the Six-foot and Three-foot Seams of HIGH BITUMINOUS COAL, now open and in good working order, with engine, boiler, pumping and winding gear, complete, now working on both seams, and open for inspection on application to the proprietor, or to the manager on the works. For further particulars apply to the proprietor, Mr. DANIEL JONES, No. 48, Strand, Swansea.

## VALUABLE IRON ORES ON LOCHFYNE TO LET.—

HEMATITE and SPATHOSE or STEEL ORE, in monster veins, 20, 30, and 35 feet in width, and 1½ mile in length. Laid open by a mountain torrent. Only 400 yards from the shore for shipping; freight to Glasgow, 2s. 3d. a ton. Surveys, plans, and reports, by Capt. Vivian, give proof of the richness and very great extent of these ores. An incline rail would enable the ore to be put on board for 1s. 6d. a ton.—Apply to the proprietor, W. FORKLOE, Esq., of Erins, Lochfyne, Argyshire.

P.S.—These mines were let, but the lessee was unable to work them, from a loss he sustained.

## IRON ORE ROYALTY TO LET.—About 52 acres, near the

Brigham railway station, near COCKERMOUTH, CUMBERLAND, the property of the Rev. JOHN DEFTON, M.A.—For particulars, apply to Mr. DICKINSON, Shannon House, Workington; or to Mr. DICKINSON, Ullock Mains, Cockermouth. Mr. JOHN THOMPSON, tenant on the farm, will show the extent.—Sept. 10, 1863.

## TO CAPITALISTS.—TO BE LET, about two miles from

Wrexham, Denbighshire, the SEAMS of COAL in and UNDER about TWO HUNDRED ACRES of LAND, lying between WREXHAM and RUABON, through which the Great Western Railway runs partly on the level, and which also abuts on the turnpike-road. Both the Wrexham and Ruabon seams of coal will be found under these lands.—Apply to Mr. WYATT, Bryntrifon Hall, near Wrexham; or to



**NICHOLLS, WILLIAMS, AND CO. ENGINEERS,**  
BEDFORD IRONWORKS, TAVISTOCK.  
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST AND NEWEST PRINCIPLES. We beg especially to call the attention of the public to the manufacture of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON AND HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. RAILWAY WORK OF EVERY DESCRIPTION.  
ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, WILLIAMS, AND CO. have had 30 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.  
Messrs. NICHOLLS, WILLIAMS, AND CO. have always a LARGE STOCK OF SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

**NEW COMBINED TURBINE, WINDING, AND PUMPING MACHINERY,**  
MANUFACTURED BY GEORGE LOW, MILLGATE IRONWORKS, NEWARK-UPON-TRENT.  
Who respectfully begs to bring the above to the notice of the mining public, as an exceedingly cheap and easy method of applying water-power for the above purposes.  
The TURBINE, WINDING, AND PUMPING MACHINERY are all fixed complete in one strong cast-iron bed plate, which can be placed in any situation without pit or excavation, and any height not exceeding 33 ft. from bottom of fall, the supply and suction pipe being all that is required to be connected to it, and can be brought in any direction. This combined machine can be easily removed when necessary.  
G. Low begs also to state that the TURBINE is the most efficient and the cheapest method of applying water-power for mining purposes.  
MANUFACTURER OF WINDING, PUMPING, CRUSHING, STAMPING MACHINERY, WINDING ENGINES, WATER WHEELS.  
IMPROVED TURBINE WATER WHEELS CONSTRUCTED EITHER TO WORK VERTICALLY OR HORIZONTALLY, and upon the MOST SCIENTIFIC AND EFFECTIVE PRINCIPLE.  
G. Low begs to recommend a special class of turbine adapted for extreme high falls (300 to 500 ft.), and consuming small quantity of water. This turbine will work with equal advantage without running at an excessive velocity. Also, MANUFACTURER OF IMPROVED BORING MACHINES FOR DRIVING ADITS.

**WASTE NO OIL. STRONG IRON OIL CISTERNS,**  
NOT LIABLE TO LEAK, AND ECONOMISE SPACE IN THE STORES.—  
DIA. HEIGHT. DIA. HEIGHT.  
500 gallons ..... 48 x 84 ..... £10 10 0 75 gallons ..... 27 x 42 ..... £ 3 15 0  
400 ..... 37 x 84 ..... 9 9 0 50 ..... 24 x 36 ..... 2 15 0  
300 ..... 37 x 84 ..... 7 7 0 40 ..... 21 x 38 ..... 2 5 0  
200 ..... 35 x 72 ..... 6 10 0 30 ..... 21 x 30 ..... 1 15 0  
150 ..... 33 x 72 ..... 6 0 0 25 ..... 19 x 30 ..... 1 5 0  
100 ..... 30 x 66 ..... 5 5 0 20 ..... 19 x 26 ..... 1 2 0  
50 ..... 27 x 55 ..... 4 10 0 10 ..... 15 x 21 ..... 0 15 0  
**STRONG IRON BUCKETS:—**  
3½ gallons ..... 48. 6d. 3½ gallons ..... 6s. 6d.  
2½ ..... 50 ..... 5 0 2½ ..... 6 0  
WAGON GREASE, in 4 and 8 cwt. casks.  
TURPENTINE SUBSTITUTE, 3s. per gallon, in 30-gallon casks.

**TO IRON AND COAL MASTERS, &c. IMPROVED BLACK VARNISH,**  
FOR PREVENTING IRON FROM RUST, AND WOOD FROM DECAY.  
A brilliant jet black, superior in appearance, dries in less time, contains preservative qualities of the best description, and is economical in its use: one gallon is equal to 14 lbs. of paint, which costs 4s.  
For COLLIERY HEAD GEARING, RAILWAY WAGONS, BOILERS, CASTINGS, CANAL BOATS, &c., it is especially adapted. In casks containing 10, 15, and 20 cwt. each. In quantities of 1 ton and upwards, price £11 per ton.  
GLOVER AND CO.,  
No. 40 MANESTY LANE, LIVERPOOL.

**ASSAYS AND ANALYSES OF EVERY DESCRIPTION**  
Conducted by JOHN MITCHELL, F.C.S., M.G.A. (late Mitchell and Rickard)  
Author of "Manual of Practical Assaying," "Metallurgical Papers," &c.  
All communications and samples to be addressed (free) to Mr. MITCHELL, care of Mr. P. Clay, 29, Great St. Helen's, London, E.C.

**CREASE'S PATENT EXCAVATING MACHINERY,**  
FOR SUPERSEDING THE SLOW AND EXPENSIVE USE OF MANUAL LABOUR IN SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 ft. per diem, and to sink shafts at the rate of 2 fms. in three days.  
Mr. Crease will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.  
Applications to be addressed (for the present) to the patentee, Mr. E. S. CREASE, Tavistock, Devon.

By providing the power of calculating the time and cost to explore a certain depth and extent of ground, speculation in mining will be assimilated to commercial pursuits, with this unmistakable advantage—that when the ground has been once carefully and judiciously selected, and operations properly and systematically carried out for its development, there would be far less chance of unsatisfactory results than are met with by merchants and manufacturers in the usual routine of their business. As this important invention must beneficially interest the landowners, mine proprietors, merchants, and miners, we opine it will meet with immediate adoption. —*Miners Journal*.

**PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL** WAS AWARDED TO THE MANUFACTURERS OF THE ORIGINAL SAFETY FUSE, RICKFORD, SMITH, DAVEY, AND PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, is infallibly distinguishable from all imitations, and ensures the continuity of the gunpowder. This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.  
Address.—RICKFORD, SMITH, DAVEY, AND PRYOR, Tuckingmill, Cornwall.

**BASTIER'S PATENT CHAIN PUMP.**  
APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, and the public in general, to his new pump, the cheapest and most effective ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

- 1.—It utilizes from 90 to 92 per cent. of the motive power.
- 2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
- 3.—It occupies a very small space.
- 4.—It raises water from any depth with the same facility and economy.
- 5.—It raises with the water, and without the slightest injury to the apparatus, sand, mud, stone, and every object of a smaller diameter than its tube.
- 6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheel Concord Mine, South Sydneyham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT HIS PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors, and others, for the USE of his INVENTION.

OFFICES, 63, DEAN STREET, SOHO SQUARE.  
London, March 21, 1863. Hours from Ten till Four. J. U. BASTIER, CIE.

**THE MINING REVIEW, AND JOURNAL OF COMMERCE, TRADE AND MANUFACTURE, SCIENCE AND THE ARTS.**  
Wednesday, March 26, 1863. Subscription, £1 1s. annually. Price 6d. stamped.

**RAILWAYS AND MINES.**  
Capitalists who seek safe and profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the bona fide merits of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the money market as affecting the renewal of debentures, and other considerations founded on data to which only those who can have access who give special attention to the subject. Mines afford a wider range for profit than any other public securities. The best are free from debt, have large reserves, and pay dividends bi-monthly varying from £15 to £25 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devote special attention to railways and mines, afford every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninitiated in selecting mines for investment; we will, therefore, forward, upon receipt of Post-office order for 5s., the names of six dividend and six progressive companies that will, in our opinion, well repay capitalists for money employed.

Messrs. TREDINNICK AND CO., STOCK AND SHAREBROKERS, AND DEALERS IN BRITISH MINING SHARES, 78, LOMBARD STREET, E.C.

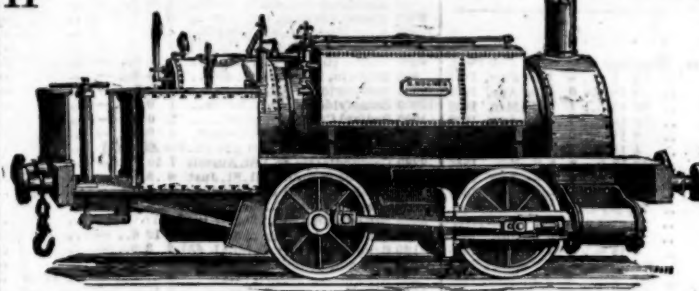
**THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER.** (ESTABLISHED 1764).  
Published every Saturday, price 2d., or quarterly 2s. 2d.  
THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.  
Published every morning, price 1d.

The best medium for mining, manufacturing, shipping, and trading advertisements in the North of England.  
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields.

**THE BUILDING NEWS.**  
An Illustrated Journal, price 4d., devoted to Architecture, Civil Engineering, the Arts of Design and Building. It contains original and practical Essays on Fine Art and on the Principles and Practices of Construction, Notices of New Buildings in all parts of the Kingdom, Reports of Architectural and Scientific Societies, Notes on Church Decorations, Memorials and Stained Glass; Sanitary, Gas, Water, and other Intelligence; Improved Dwellings for the Working Classes; Lists of Tenders received, and of Commissions and Contracts open; suggestions (sometimes illustrated) on subjects specially interesting to Architects, Builders, Contractors, and their Employers; correct weekly lists of all new patented inventions connected with every branch of the building trade, and a variety of interesting miscellaneous matter.

London: 26, Bonaville-street, Fleet-street, E.C.

**HENRY HUGHES, FALCON WORKS, LOUGHBOROUGH**



Tavistock Ironworks, Devon.—(Established 1804.)

**GILL AND CO., ENGINEERS AND IRONFOUNDERS.**  
MANUFACTURERS OF STEAM ENGINES AND BOILERS. CHAINS OF ALL DIMENSIONS. STEELED SHOVELS to any pattern. EVERY DESCRIPTION OF CAST AND HAMMERED IRON FOR MINING, MANUFACTURING, AND AGRICULTURAL PURPOSES.  
HAMMER MILLS. EDGE TOOL MANUFACTORY.  
FOREIGN MINES SUPPLIED ON LIBERAL TERMS.  
VARIOUS DESCRIPTIONS OF SECOND-HAND MACHINERY CONSTANTLY ON HAND.  
N.B.—AGENTS FOR TANGY'S PATENT HYDRAULIC LIFTING JACK, and WESTON'S PATENT DIFFERENTIAL PULLEY BLOCKS.

International Exhibition, 1862.

CLASS IX.—PRIZE MEDAL for AGRICULTURAL PORTABLE STEAM ENGINES AND MACHINERY.  
CLASS VIII.—PRIZE MEDAL for HORIZONTAL HIGH PRESSURE STEAM ENGINES.

For "Good arrangement, good workmanship, and practical success."

**CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS.**

MANUFACTURERS OF PORTABLE AND FIXED STEAM ENGINES, MACHINERY FOR PUMPING, HOISTING, GRINDING, SAWING, and AGRICULTURAL PURPOSES, &c., adapted for any part of the world.

STAMP END WORKS, LINCOLN; and 78, LOMBARD STREET, LONDON.  
Descriptive, illustrated, and priced catalogues free per post.

Prize Medal Awarded Great Exhibition, 1851, for Mining Chains.

**EDGE AND SON,**

MANUFACTURERS OF IMPROVED FLAT AND ROUND CHAINS AND WIRE ROPES, for MINING PURPOSES.

BOULTS, KIBBLES, BOILERS, IRON BLOCKS, and BLOCK CHAINS.

RAILWAY COUPLING HORSE TRACES, CRANE CHAINS, and SHIP'S CABLES.

MANUFACTORY, COALPORT, SHROPSHIRE.

Prize Medal, International Exhibition, 1862.

**AVELING AND PORTER'S PATENT TRACTION ENGINES AND LOCOMOTIVES FOR MINERAL RAILWAYS.**

For prices, illustrated description, and testimonials, apply to AVELING and PORTER, engineers, Rochester, Kent.

**RAILWAY STONE AND COAL WAGONS TO BE LET.**

Apply to Messrs. W. L. and T. UNDERHILL, Tipton.

**RAILWAY CARRIAGE COMPANY (LIMITED).**

ESTABLISHED 1847. OLDBURY WORKS, NEAR BIRMINGHAM.

MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.

Passenger carriages and wagons built, either for cash or for payment over a period of years.

RAILWAY WAGONS FOR HIRE.

CHIEF OFFICES.—OLDBURY WORKS, NEAR BIRMINGHAM.

LONDON OFFICES.—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

**THE BIRMINGHAM WAGON COMPANY (LIMITED)** IS PREPARED TO SUPPLY RAILWAY WAGONS OF EVERY DESCRIPTION, capable of carrying 6, 8, or 10 tons, at annual rentals, or for purchase on deferred payments, on advantageous terms.

EDMUND FOWLER, Secy.

OFFICES.—3, NEWHALL STREET, BIRMINGHAM.

**ELLIS LEVER, INVENTOR AND MANUFACTURER OF THE IMPROVED SAFETY BRATICE AND FLEXIBLE TUBING,**

29, MARDEN SQUARE, MANCHESTER.

MANUFACTORY.—WEST GORTON WORKS, MANCHESTER.

**COAL CUTTING MACHINERY.**

The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY TO MAKE CONTRACTS FOR THE CONSTRUCTION AND USE OF THEIR MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN THE COST AND IMPROVE THE AVERAGE SIZE OF THE COAL, TO LIGHTEN THE LABOUR, and also TO MODIFY THE SAFETY CONDITION OF THE MINE.

All communications to be made to Messrs. FITZ, DOMESTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

**NOTICE.**—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT IS MADE.

**EDWARDS'S PATENT MINERAL ORE AND COAL WASHING MACHINE.**—This is by far the MOST ECONOMICAL, as well as the MOST PERFECT MACHINE MADE. Each machine is capable of washing 25 to 50 tons per diem, according to quality.—Full particulars, testimonials, &c., may be obtained from E. EDWARDS, Esq., C.E., 1, York-buildings, Adelphi, where a working model may be seen.

Adopted by the Governments of Great Britain, Spain, Denmark, Russia, Brazil, East and West India.

**EASTON'S PATENT BOILER FLUID,**

FOR REMOVING AND PREVENTING INCORUSTATION IN STEAM BOILERS, LAND AND MARINE.

P. S. EASTON AND G. SPRINGFIELD, Patentees and Sole Manufacturers,

37, 38, and 39, WAPPING WALL, LONDON, E.

Or of their Agents in the principal towns of Great Britain and the Colonies.

**FISHER BROTHERS AND CO.,**

FIRE BRICK MANUFACTURERS, STOURBRIDGE.

BLAST FURNACE BRICKS OF THE MOST DURABLE QUALITY SUPPLIED TO ANY SPECIFICATION.

**SHORTIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, AND TUBES, COMBINING THE STRENGTH OF STEEL WITH THE MALLEABILITY OF COPPER.**

RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES.

McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTIDGE, HOWELL, AND CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY AND CO., 12, Haymarket, London.

**The Railway System of the World.**

**TESTIMONIAL TO WILLIAM HENRY JAMES, C.E.**

In recognition of his unrequited public services in connection with the founding of our magnificent railway system, by the gratuitous assistance he rendered his late father, William James, Esq., of Warwick, land agent, ironmaster, and civil engineer, in surveying, levelling, and planning the Liverpool and Manchester Railway, with its branches to Bolton, &c., in the years 1821, 1822, and 1823, the first established for engine passenger transit; and for his having allowed the late George Stephenson and his partner, Mr. Losh, of Newcastle-upon-Tyne, the liberty of using his invention of the introduction of Tubes into the boilers of (their) locomotive engines, as shown by an agreement, dated Sept. 1, 1821, which introduction of Tubes, as first suggested by Mr. William Henry James, and since adopted, modified, and perfected by the engineering profession, is well known to every engineer to have caused the entire success of the modern railway system; and, lastly, to compensate him in some slight degree for the loss of his patrimony of £250,000, as settled by will, as well as private property of great value, by the ruin of his father, in 1823, while so engaged, and while so assisting him in laying the foundation of the great railway system of the world, which has already conferred such inestimable benefits upon mankind.

As a guarantee, the following eminent engineers and gentlemen have already attached their names in furtherance of this testimonial, to which it is expected many others will soon be added, viz:—

GEORGE RENNIE, Sir JOHN MACNEILL, THOMAS BARKLEY, JOSEPH PARKES, SIR CHARLES FOX, PETER BARLOW, WM. SCHOLEFIELD, M.P., JOSEPH PARKES, WM. MARSDEN, M.D.

PERSONAL REFEREES.

Mr. RICHARD MIDDLETON, *Mining Journal*, 26, Fleet-street.

Mr. RICHARD A. BROOMAN, *Mechanics Magazine* office, 160, Fleet-street.

It is respectfully requested that all contributions may be made to Messrs. CUTTS and Co., bankers, London, who have kindly consented to receive such subscriptions; and any sums offered will be carried to the credit of "Subscriptions for W. H. James, C.E.," and will be held at his disposal.

A complete list of subscribers, together with the amount of their donations, will be published as soon as they shall reach an adequate amount.

This LOCOMOTIVE ENGINE has been DESIGNED expressly for CONTRACTORS and MINERAL RAILWAYS. It is VERY STRONG in EVERY PART, and, being mounted on small wheels close together, will MOUNT STEEP GRADIENTS and TURN SHARP CURVES.

The BOILERS are of the BEST PLATES, with fire-boxes of Low Moor, are clothed with half felt, lagged and covered with sheet iron, and PROVIDED to a PRESSURE OF TWO HUNDRED POUNDS PER SQUARE INCH.

The TYRES are of the BEST YORKSHIRE IRON, and of GREAT THICKNESS. The tank contains 250 gallons.

The FITTINGS consist of BUFFERS, POWERFUL BRAKE, GIFFARD'S INJECTOR, ROSCOE'S OILING APPARATUS, PRESSURE GAUGE, WATER GAUGE, and BLOWER to GET UP STEAM.

The engines are all tried before leaving the works, and an experienced man sent with them free of cost.

Full specification on application.  
10 in. cylinders, 15 in. stroke, price £260.

International Exhibition, 1862—Prize Medal.

**JAMES RUSSELL AND SONS**  
(the original patentees and first makers of wrought-iron tubes), of the CROWN PATENT TUBE WORKS, WEDNESBURY, STAFFORDSHIRE, have been AWARDED a PRIZE MEDAL for the "good work" displayed in their wrought-iron tubes and fittings.  
Warehouse, 51, Upper Ground-street, London, S.

Prize Medal, International Exhibition, 1862.

**RUSTON, PROCTOR, AND CO.'S CELEBRATED PRIZE PORTABLE ENGINES** are SPECIALLY ADAPTED FOR WINDING, PUMPING, SAWING, &c. These engines have, in public competition, won the highest honours. For ECONOMY in WORKING, LARGE ALLOWANCE OF POWER in CYLINDER AREA and PROPORTIONATE SIZE OF BOILER, STRENGTH OF CONSTRUCTION, HIGH FINISH, and GENERAL EFFICIENCY they are unrivalled, having recently been AWARDED THIRTEEN GOLD, SILVER, and BRONZE PRIZE MEDALS, and numerous other prizes.

Messrs. A. Knowles and Sons write:—

Pendlebury Colliery, near Manchester, June 5, 1861.

GENTLEMEN.—We beg to inform you that we have now in use the portable engine of 8 horse power you supplied us with, and have great pleasure in informing you that it works well, and we are much pleased with the workmanship and finish of it.

We are, yours respectfully, ANDREW KNOWLES AND SONS.

Illustrated, descriptive, and priced catalogues may be had on application to the Sheaf Ironworks, Lincoln.

Prize Medals—International Exhibition, Class 1 and 2.

**PATENT PLUMBAGO CRUCIBLES.**

THE CRUCIBLES manufactured by the PATENT PLUMBAGO CRUCIBLE COMPANY are the ONLY KIND for which a MEDAL has been AWARDED, and are now used exclusively by the English, American, and Indian Miners; the French, Russian, and other Continental Miners; the Royal Armaments of Woolwich, Brest, and Toulon, &c.; and have been adopted by most of the large ENGINEERS, BRASSFOUNDERS, and REFINERS in this country and abroad. THE GREAT SUPERIORITY of these melting pots consists in their capability of melting on an average 40 pourings of the most difficult metals, and a still greater number of those of an ordinary character, some of them having actually reached the EXTRAORDINARY NUMBER of 96 meltings. They are unaffected by change of temperature, never crack, and become heated much more rapidly than any other crucibles. In consequence of their great durability, the saving of waste is also very considerable.

The company have recently introduced CRUCIBLES SPECIALLY ADAPTED for the following purposes, viz:—MALLEABLE IRON MELTING, the average working of which has proved to be about seven days; STEEL MELTING, which are found to save nearly 1½ ton of fuel to every ton of steel fused; and for ZINC MELTING, lasting much longer than the ordinary iron pots, and saving the great loss which arises from mixture with iron.

For lists, testimonials, &c., apply to the Patent Plumbago Crucible Company, Battersea Works, London, S.W.

Fully described in the MINING JOURNAL of July 5.

**BARCLAY'S PATENT STEAM AND WATER PRESSURE AND VACUUM GAUGES.**

These GAUGES are MADE TO INDICATE ANY PRESSURE FROM ONE TO TWENTY THOUSAND POUNDS UPON THE SQUARE INCH.

EACH GAUGE IS GUARANTEED FOR FIVE YEARS.

PATENTEE AND MAKER, ANDREW BARCLAY, ENGINEER, KILMARNOCK.

**PUBLIC TEST OF WIRE-ROPE.**

THE SUPERIOR QUALITY OF GARNOCK, BIBBY, AND CO.'S WIRE-ROPE WAS FULLY PROVED by a RIVAL MANUFACTURER at the LIVERPOOL PUBLIC TESTING MACHINE, on the 29th of October, 1860, on which occasion GARNOCK, BIBBY, AND CO.'S rope was found to be the STRONGEST of all the TWELVE SAMPLES from different makers then tested, as reported in the papers of the day. For example:—

(Certified by Mr. William Macdonald, superintendent.)

Garnock, Bibby, and Co. Corresponding sizes from other manufacturers.

Sizes. Tons c. Tons c. Tons c. Tons c.

3½ in. .... 18 15 ..... 16 10 ..... 11 10

2½ in. .... 8 15 ..... 7 15 ..... 5 0

Remaining sizes with similar results.

\* Samples taken promiscuously from stock by a rival manufacturer's agent.

GARNOCK, BIBBY, AND CO., SWAN HEMP AND WIRE ROPE MANUFACTURERS, LIVERPOOL.

FLAT AND ROUND STEEL AND IRON WIRE ROPES for MINES, &c., of SUPERIOR QUALITY.

**MESSRS. KNOWLES AND BUXTON, CHESTERFIELD, MANUFACTURERS OF PATENT TUBULAR TUYERES.**

The PATENT TUBULAR TUYERE possesses GREAT ADVANTAGES over the ORDINARY TUYERES, both for its DURABILITY and EASY WORKING. A current of cold water going direct to the nozzle prevents their destruction, however much they may be exposed to the fire.

We repair them at half the first cost, making them equal in size to new ones, all parties returning them carriage paid.

No. 1 tuyere, 16 in. long ..... 38s. each.

No. 2 " 18 " ..... 32s. "

No. 3 " 20 " ..... 30s. "

No. 4 " 22 " ..... 40s. "

No. 5 " 24 " ..... 44s. "

Delivered at Chesterfield station. Terms, nett cash quarterly.

**THOMAS TURTON AND SONS,** MANUFACTURERS OF CAST STEEL FOR PUNCHES, TAPS, AND DIES, TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT AND CRANK AXLES, SHAFTS, and

FORGE OF EVERY DESCRIPTION.

DOUBLE SHELL STEEL. FILES MARKED T. TURTON.

BLISTER STEEL. EDGE TOOLS MARKED WM. GREAVES & SON.

SPRING STEEL. Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

GERMAN STEEL.

Illustrated Catalogue, with Prices, forwarded on receipt of 13 stamps.

**SHEAF WORKS AND SPRING WORKS, SHEFFIELD.**

LONDON OFFICE: 17, KING WILLIAM STREET, CITY.

**D. R. SMITH** has just published a free edition of his valuable work, the PRIVATE MEDICAL FRIEND (116 pages), on the Self Cure of Nervous Debility, Loss of Memory, Dimness of Sight, Lassitude, &c., resulting from the errors of youth. Sent post free to any address, on receipt of a directed envelope, enclosing two postage stamps.—Address, Dr. SMITH, 3, Burton-crescent, Tavistock-square, London W.C.



## THE MINING SHARE LIST

## DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000	Bellfield United (copper), Tavistock	2 6 8	..	..	13 1 0	0 1 6 July, 1863
1248	Bocawell (tin, copper), St. Just	6 15 0	..	..	0 10 0	0 5 0 Aug, 1863
240	Bocawell (tin), St. Just	20 10 0	..	..	36 10 0	1 0 0 Mar, 1862
900	Botalack (tin, copper), St. Just	91 5 0	..	..	469 15 0	7 0 0 Aug, 1863
4000	Brooklyn (lead), Cardigan [L. £3]	2 7 6	..	..	0 15 0	2 6 Aug, 1863
816	Cargill (silver-lead), Newlyn	15 7 7	..	..	4 15 0	1 5 0 Aug, 1863
1000	Carn Brea (copper, tin), Illogan	15 0 0	..	..	278 10 0	2 0 0 Feb, 1862
2000	Clifford Amalgamated (cop.), Gwenn	30 0 0	..	..	29 6 0	0 19 Aug, 1863
1024	Copper Hill (copper), Redruth	25 0 0	..	..	2 7 6	.. Sept, 1863
12000	Copper Miners of England	25 0 0	..	..	7 1/2 per cent.	.. Half-yrly.
40000	Ditto ditto (stock)	100 0 0	..	..	7 1/2 per cent.	.. Half-yrly.
1056	Craddock Moor (copper), St. Clear	8 0 0	..	..	7 12 0	0 4 0 July, 1863
867	Cwm Erfin (lead) Cardiganshire [L.]	7 10 0	..	..	0 18 0	0 15 0 July, 1863
128	Cwmystwith (lead), Cardiganshire	60 0 0	..	..	256 10 0	4 0 0 Aug, 1863
280	Derwent Mines (sil.-lead), Durham	300 0 0	..	..	147 0 0	5 0 0 June, 1863
1024	Devon Gt. Con. (cop.), Tavist. [S.E.]	1 0 0	..	..	863 0 0	9 0 0 July, 1863
368	Dolcoath (copper, tin), Camborne	128 17 6	..	..	735 10 0	8 0 0 Aug, 1863
12000	Drake Walls (tin, copper), Calstock	2 1 0	..	..	0 18 0	0 1 6 May, 1863
512	East Basset (cop.), Redruth [S.E.]	39 10 0	..	..	111 0 0	2 0 0 July, 1863
6144	East Caradon (copper), St. Gluv. [S.E.]	2 14 0	..	..	7 7 6	0 12 Aug, 1863
320	East Darnley (lead), Cardiganshire	22 0 0	..	..	87 10 0	2 0 0 Aug, 1863
128	East Pool (tin, copper), Pool, Illogan	24 0 0	..	..	340 0 0	5 0 0 Aug, 1863
1936	East Wheal Lovell (tin), Wendron	2 13 6	..	..	0 7 8	0 7 6 Sept, 1863
3800	Foxdale (lead) Isle of Man [L.]	25 0 0	..	..	..	.. July, 1862
1798	Great Wheal Fortune (tin), Breage	18 6 0	..	..	5 5 0	0 15 0 Aug, 1863
5908	Great Wh. Vor (tin, cop.), Helston [S.E.]	40 0 0	..	..	2 12 6	0 5 0 Aug, 1863
1024	Harbottle (id.), near Liskeard [S.E.]	8 10 0	..	..	25 0 0	1 15 0 June, 1863
400	Harbottle (lead), Cardiganshire, Wales	18 10 0	..	..	409 10 0	3 0 0 Aug, 1863
1800	Martha Valley (copper), Cardigan	4 10 0	..	..	122 10 0	7 15 0 Aug, 1863
1800	Minera Miners (cop.), Wrexham	25 0 0	..	..	15 17 0	0 11 Jan, 1863
20000	Mining Co. of Ireland (cop.-lead, coal)	7 0 0	..	..	0 2 0	0 2 0 June, 1863
40000	Myndy (iron ore), [L. £4] [S.E.]	2 10 0	..	..	0 2 0	0 2 0 June, 1863
250	Nanty Mines (lead), Montgomery	20 0 0	..	..	0 2 0	0 2 0 June, 1863
6000	New East Birch Tor and Vitrifer	..	..	..	0 2 0	0 2 0 Sept, 1863
5936	North Trekerby (copper), St. Agnes	1 9 0	..	..	0 7 6	0 1 6 June, 1863
5000	Orsedd (lead), Flintshire	0 8 0	..	..	0 10 0	0 8 0 Mar, 1862
640	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	..	..	36 19 0	0 2 6 Mar, 1863
307	Parya Mines (copper), Anglesey [L.]	50 0 0	..	..	72 10 0	10 0 0 July, 1863
1772	Pobberro (tin), St. Agnes	0 15 0	..	..	7 9 6	0 10 0 April, 1863
512	Polbren (tin), St. Agnes	10 0 0	..	..	1 0 0	1 0 0 July, 1863
1123	Providence (tin), [S.E.]	10 6 0	..	..	15 18 0	1 5 0 Aug, 1863
6000	Rosewell Hill and Ransom United	2 16 0	..	..	0 10 0	0 10 0 June, 1863
16	Rhosmor (lead)	50 0 0	..	..	1250 0 0	100 0 0 Quarterly.
612	South Caradon (cop.), St. Clear [S.E.]	1 5 0	..	..	409 0 0	5 0 0 July, 1863
512	South Tolgus (cop.), Redruth, Cornwall	8 0 0	..	..	74 10 0	1 0 0 May, 1863
8000	South Exmouth (lead), Christow	1 0 0	..	..	0 5 0	0 5 0 Dec, 1862
498	S. Wh. Frances (cop.), Illogan [S.E.]	18 18 0	..	..	369 5 0	1 0 0 Sept, 1863
280	Sparrow Moor (tin, copper), St. Just	31 17 6	..	..	0 18 0	1 0 0 June, 1863
840	St. Ives Consols (tin), St. Ives	8 0 0	..	..	487 10 0	1 0 0 Aug, 1863
6000	Tincroft (tin), Pool, Illogan [S.E.]	9 0 0	..	..	13 8 0	1 0 0 Aug, 1863
1000	Trumpet Consols (tin), Helston	11 10 0	..	..	11 0 0	2 0 0 Mar, 1862
12000	Twelve Apostles Amalg. (id.), Wrexham	..	..	..	4 13 6	1 0 0 Oct, 1862
4200	Vigra and Clogau (copper) [L. £5]	2 15 0	..	..	24 2 0	0 5 0 July, 1863
6000	West Basset (copper), Illogan [S.E.]	1 10 0	..	..	47 0 0	1 0 0 July, 1863
256	West Damsel (copper), Gwennap	38 10 0	..	..	0 19 0	0 3 0 May, 1862
6100	West Fowey Consols (tin and copper)	7 10 0	..	..	388 0 0	5 0 0 Aug, 1863
1000	W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0	..	..	593 10 0	1 0 0 Aug, 1863
512	Wheal Basset (copper), Illogan [S.E.]	5 2 6	..	..	3 10 0	0 10 0 July, 1863
1000	Wheal Basset and Grylla (tin)	7 0 0	..	..	6 2 0	1 0 0 Sept, 1863
1024	Wheal Grylla (tin), Penrynshire	3 14 0	..	..	76 5 0	1 0 0 May, 1863
898	Wh. Margaret (tin), [S.E.]	2 17 6	..	..	284 5 0	4 0 0 Mar, 1862
1000	Wheal Mary (tin), Lelant	8 0 0	..	..	328 3 0	5 0 0 Jan, 1861
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	..	..	156 15 0	3 0 0 Aug, 1863
80	Wheal Owles (tin), St. Just, Cornwall	70 0 0	..	..	47 12 6	0 10 0 Aug, 1863
396	Wheal Seta (tin, copper), Camborne	58 10 0	..	..	0 10 0	0 10 0 Aug, 1863
1040	Wh. Trevelyan (sil.-id.), Liskeard [S.E.]	5 17 0	..	..	14 5 0	1 6 0 Aug, 1863
2044	Wheal Tremayne (tin), Gwinnar	6 11 3	..	..	..	..
17000	Wicklow (copper) [L.]	2 10 0	..	..	13	..

\* Dividends paid every two months. † Dividends paid every three months.

## MINES WITH DIVIDENDS IN ABEYANCE.

1000	Alderley Edge (Cheshire) [L.]	0 0 0	..	..	7 18 6	0 10 0 May, 1863
256	Condurow (cop.), Camborne	35 0 0	..	..	85 0 0	2 0 0 June, 1863
3000	Chiverton (lead), Penrynshire	..	..	..	0 10 0	0 10 0 Jan, 1862
2450	Coke's Kitchen (copper), Illogan	17 15 9	..	..	1 7 0	0 7 0 May, 1862
512	Croaghwaile (tin), St. Columb	5 16 0	..	..	0 10 0	0 2 6 Feb, 1859
4008	Devon and Cornwall (copper)	12 6 0	..	..	0 17 0	0 2 6 Jan, 1863
3078	Dyffrynwm (lead), Wales	12 6 0	..	..	41 9 0	2 6 0 Jan, 1863
940	Foway Consols (copper), Tywardreath	4 0 0	..	..	0 10 0	0 2 0 Mar, 1862
8000	Great South Tolgus (S.E.), Redruth	0 14 6	..	..	7 18 6	0 5 0 Dec, 1861
1024	Gunnis Lake (Chitlers' Adit)	0 2 0	..	..	0 3 0	0 1 6 Mar, 1862
5000	Kelly Bray (lead, copper), Callington	4 15 0	..	..	0 8 0	0 2 0 Feb, 1860
180	Levant (copper, tin), St. Just	2 10 0	..	..	1091 0 0	5 0 0 May, 1860
440	Mount Pleasant (lead), Mold	4 0 0	..	..	18 18 0	7 6 0 Aug, 1862
6000	New Birch Tor and Vitrifer Cons. (tin)	1 8 0	..	..	0 3 0	0 1 0 Sept, 1861
470	Newtownards Mining Co., Co. Down	50 0 0	..	..	56 0 0	1 0 0 Sept, 1858
1024	North Woodley	0 10 0	..	..	5 6 0	0 2 6 Jan, 1861
9000	Tamar Con. (all.-id.), Beeraam (S.E.)	4 0 0	..	..	7 0 0	0 10 0 Sept, 1860
572	Treloyn Consols (tin), St. Ives	13 10 0	..	..	8 10 0	1 0 0 Jan, 1861
1024	Wendron Consols (tin), Wendron	13 10 0	..	..	14 10 0	3 0 0 June, 1861
60	West Burton Hill (lead), Yorkshire	60 0 0	..	..	929 0 0	2 0 0 Mar, 1861
256	Wheal Buller (cop.), Redruth [S.E.]	5 0 0	..	..	101 1 3	0 10 0 Oct, 1862
1024	West Caradon (cop.), Liskeard [S.E.]	5 0 0	..	..	..	..
128	Wheal Chiverton (lead), Penrynshire	80 0 0	..	..	3400 10 0	5 0 0 Feb, 1861
1024	Wheal Hearn (tin), St. Just	10 18 0	..	..	0 5 0	0 5 0 May, 1862
512	Wheal Jane (silver-lead), Kes	10 18 0	..	..	12 10 0	0 2 6 Mar, 1862
1024	Wheal Kitty (tin), [S.E.]	15 0 0	..	..	0 10 0	0 10 0 July, 1863
4298	Wheal Kitty (tin), St. Agnes	5 4 6	..	..	0 18 6	0 2 0 July, 1863
4800	Wh. Ludcott and Wrey (lead), St. Ives	2 10 0	..	..	3 4 6	0 2 6 April, 1863

## FOREIGN MINES.

2484	Burra Burra (cop.), South Australia	5 0 0	..	..	310 0 0	5 0 0 June, 1863
6000	Central American (silver) [L.]	5 0 0	..	..	2 2 9	0 14 0 Oct, 1862
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	..	..	98 12 0	1 0 0 Jan, 1862
10000	Copiapu Mining Company (id.) [S.E.]	18 0 0	..	..	6 18 0	0 10 0 Nov, 1862
18000	East Indian Coal, Calcutta [L.]	0 0 0	..	..	..	..
70000	English and Australian [S.E.]	5 0 0	..	..	1 6 0	0 3 6 Yearly.
25000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	..	..	0 4 0	0 4 0 Mar, 1863
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	120 0 0	..	..	19 15 0	0 10 0 June, 1863
68000	Kapunda Mining Co., Australia [S.E.]	1 0 0	..	..	0 10 0	0 1 0 June, 1862
18000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	..	..	0 9 2	0 5 0 June, 1863
10000	Lustanion (of Portugal) [S.E.]	2 0 0	..	..	0 19 0	0 1 0 Feb, 1863
108515	Mariguata and New Granada [S.E.]	1 0 0	..	..	0 9 6	0 1 6 July, 1859
10000	Port of Rio de Janeiro (S.E.)	1 0 0	..	..	0 9 6	0 1 0 July, 1863
11000	St. John del Rey (L.), Brazil [S.E.]	15 0 0	..	..	58 5 0	3 10 0 June, 1863
43174	Unit. Mexican (id.), Mexico [S.E.]	28 5 0	..	..	0 2 0	0 2 0 May, 1860
90000	West Canada Mining Company [L.]	1 0 0	..	..	0 2 0	0 5 0 Aug, 1863
40000	Yudana-sutana (cop.), S. A. [L.] [S.E.]	3 0 0	..	..	0 5 0	0 5 0 Aug, 1863

## FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altendorf and Quannagen (id.) [L.] [S.E.]	4 10 0	..	..	4 5 0	0 15 0 Nov, 1863
10000	Gt. Barrier Lead, Min. & N. Z. [S.E.]	4 10 0	..	..	15 0 0	.. May, 1859
10000	Pontgibaud (sil.-lead), France [S.E.]	20 0 0	..	..	1 0 0	1 0 0 June, 1855

## NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
30000	Alamillos (lead), Spain [L. £2]	0 10 0	—	% %	Sept. 1858
20000	Australian (copper), South Australia [S.E.]	7 7 6	—	—	May, 1863
20000	Bearis Tin Streaming Company [L. £1]	0 15 0	—	—	June, 1863
70000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	1 0 0	—	—	June, 1863
18000	Capa Copper Mining Company [L. £10]	4 0 0	—	—	Jan. 1859
25000	Capula (silver), Mexico [L. £2] [S.E.]	0 15 0	—	—	Jan. 1859
17000	Central Italian (copper) [7000 £2 paid]	0 15 0	—	—	Nov. 1862
60000	Clarendon Consols (copper), Jamaica [S.E.]	1 2 6	—	—	—
10000	Copiapu Smelting [L.], Chili	10 0 0	—	—	—
100000	Dun Pedro North Del Rey (gold), Brazil [L. £1] [S.E.]	0 10 0	1 ½	% 1 ½	Aug. 1862
25000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	—	—	—
80000	East del Rey (gold), Brazil [L. £3]	1 0 0	—	—	Sept. 1861
80000	East Kongberg Native Silver Mining Co. of Norway [L. £5]	1 7 6	—	—	Mar. 1862
20000	Elbera and Bardowie (copper), Jamaica	1 0 0	—	—	—
80000	English and Canadian Mining Company [L.]	5 0 0	—	—	July, 1859
40000	Fortune (copper), West Australia [L.]	2 0 0	—	—	—
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	1 10 0	—	—	June, 1863
94000	Hindostan (copper), Bengal [L. £5]	3 0 0	—	—	Feb. 1863
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	—	—	—
10000	Karibita Colliery Company [L.]	1 0 0	—	—	—
20000	Lagunas (sulphur, copper), Portugal [L.]	1 0 0	—	—	—
100000	Montes Aures (gold), Brazil [L.] [S.E.]	1 0 0	—	—	—
2000	New Burra Burra (copper) (Australia)	5 0 0	—	—	—
60000	New Granada (gold), South America [S.E.]	1 0 0	—	—	—
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	1 0 0	—	—	—
60000	North Rhine Copper of South Australia [L. £1] [S.E.]	0 17 6	—	—	—
50000	Nova Scotia (lead and gold) [L. £2]	1 0 0	—	—	—
18000	Pachona Silver Mining Company, Mexico [L. £1]	1 0 0	—	—	—
17000	Quebrada (copper), Venezuela [L. £10]	3 10 0	—	—	—
10000	San Roque (lead), Spain	0 10 0	—	—	—
60000	Santa Barbara (gold), Brazil [L. £1]	0 10 0	—	—	—
120000	Scottish Australian Mining Company [L. £1]	0 15 0	—	% %	Mar. 1862
15000	South Europe Mining Company, Spain [L. £5]	3 0 0	—	—	May, 1860
50000	St. John's United (copper, lead), Newfoundland [L.]	1 0 0	—	—	—
12000	Tepitilla Colliery Co., Bohemia [L. £5]	3 0 0	—	—	—
50000	Vallanza (gold), Italy [L. £1]	0 5 0	1 ½	—	—
10000	Vancouver (coal) [L. £10]	8 0 0	—	—	—
45000	Victor Emanuel (copper), Italy [L.]	1 0 0	—	—	—
1000	Western Africa Malachite (copper) [L.]	110 0 0	—	—	—
12000	Whael Ellen (copper), South Australia [L.]	5 0 0	—	—	—
80000	Working (copper), South Australia [L.] [S.E.]	1 0 0	—	% %	—